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THE ARMED FORCES



COMPTROLLER



WASHINGTON, D. C.

DECEMBER 1958

VOLUME III

NUMBER 4



AMERICAN SOCIETY OF MILITARY COMPTROLLERS

NATIONAL



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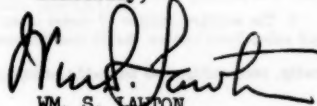
15 December 1958

MEMBERS:

All National Officers and Council

Members join me in wishing you and yours a
Merry Christmas and a Happy and Prosperous
New Year.

Sincerely,


WM. S. LAWTON
Lieut. General, USA
National President

Publishers: File two copies of this Form with your postmaster.

STATEMENT REQUIRED BY THE ACT OF AUGUST 24, 1912, AS AMENDED BY THE ACTS OF MARCH 3, 1933, AND JULY 2, 1946 (Title 39, United States Code, Section 233) SHOWING THE OWNERSHIP, MANAGEMENT, AND CIRCULATION OF

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<u>(A professional Non Profit Organization composed of approximately 1200 members)</u>	

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4. Paragraphs 2 and 3 include, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting; also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner.

5. The average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the 12 months preceding the date shown above was: (This information is required from daily, weekly, semiweekly, and triweekly newspapers only.)

Kenneth E. Dunlap
(Signature of editor, publisher, business manager, or owner)

Sworn to and subscribed before me this 18th day of September, 1958

[SEAL]

Richard A. Gaughan

THE ARMED FORCES COMPTROLLER

Quarterly National Journal

Vol. III

No. 4

December 1958

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"The Armed Forces Comptroller" is a forum for the presentation of the activities of Military Comptrollership. The views expressed by the authors of articles herein, therefore, do not necessarily represent the views of the Government Agency, the Armed Forces or the National Council of the American Society of Military Comptrollers.

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LETTERS TO THE EDITOR

delighted . . .

"May I congratulate you on the excellent presentations included in 'The Armed Forces Comptroller.' Members of our San Antonio chapter, here at the birthplace of the Society, have expressed many fine compliments. We are delighted to see the Journal reach successful fruition. * * *"

L. P. Henslee,
Lt. Colonel, USAF
President
San Antonio Chapter, ASMC

bouquet . . .

"The first copy of the 'Newsletter' has been received * * *. As an old hand in the publishing and public relations field, the writer wishes to add a bouquet for your new venture. The Newsletter is a fine medium of transferring ideas from one chapter to another. A successful program offers other groups similar ideas. Congratulations and continued success."

Theodore A. Gottry
Public Relations Committee
Hawaii Chapter, ASMC

filling a need . . .

"The September issue of 'The Armed Forces Comptroller' contained a fine group of articles, as usual. You are to be congratulated on your success in obtaining such a quantity of authoritative contributions on the comptroller-ship concept. These articles are most capably filling a need which has existed for a long time. * * *"

Will Linsert
Comptroller Office
U.S. Naval Station
Argentina, Newfoundland

REPORT ON SECOND NATIONAL CONVENTION
of the
AMERICAN SOCIETY OF MILITARY COMPTROLLERS
23, 24 October 1958

Theme:
"New Horizons of Comptrollership in the Armed Forces"

John C. Jeffers, Associate National Editor
(For Convention Reporting Committee)

Note: Due to space limitation herein much of the excellent material presented and developed during the Convention will either be for publication in the Armed Forces Comptroller or will be available upon request for a limited time through contact with the Editor. Comments in this article are not those of the Convention speakers or participants but represent an onlooker's viewpoint. Time and effort limitations prevent a personal clearance on all citations but such citations are documented insofar as practical.--J.C.J.

CONVENTION PROCEEDINGS

Opening Remarks --

Lieutenant General William S. Lawton, Comptroller of the Army, National President ASMC, 23 October 1958:

...Although this is only our second convention, it finds the Society in its tenth year. And the last ten years have been busy ones indeed; for the advance from a small beginning in San Antonio to the stature of our Society today represents the efforts and contributions of many. I want to thank those individuals now who have done so much to bring us to this stage. I know we can continue to count on their support. I also want to thank those who are present here today. Some have come a long way. Even those who came from their offices here in Washington, I know have come at a great sacrifice of their time. I especially would like to express my appreciation to those local members who have planned and organized this convention. They have done well. The Chairmen of the Committees who put this convention together are:

Vice Admiral Edward W. Clepton -- Convention Policy Committee

Colonel Ernest L. Osborne -- Program Committee

Mr. Kenneth E. Dunlap -- Advertising Committee

Mr. John H. Prince, Arrangements Committee

Mr. Oscar C. Lightner -- Qualifications Committee

Mr. Kenneth E. Dunlap -- Convention Reporting Committee

I know there were many others who assisted the Chairmen -- the thanks of all the members go to all of those who have worked so hard.

Our original group which formed the Society were primarily accountants and statisticians, but the area of interest was soon broadened to include members who were interested in budgeting, finance, and statistical analysis.

Since these functions are found in all comptroller offices, it was a natural progression for the Society of Military Comptrollers to broaden its activities still further. As well as expanding the activities of the Society, the last decade has seen a broadening of the membership base. Our original founding members were all military, but in our present membership ten years later of over 1200, civilian members by far exceed the military.

We've increased geographically as well. There were three chapters in 1955. Now there are twenty-seven, and these twenty-seven chapters are world-wide. I can bear personal witness to this, for on a recent trip to Europe, I was present at the Paris Chapter of our Society. There I noticed with pleasure that not only Americans interested in Comptrollership were present, but also associate members of our Society -- officers from allied nations who were working in and interested in this field.

Their interest was natural, for the value of such an association as ours is apparent. Valuable -- because it is, first of all, a national professional organization with its obvious advantages. But there are other advantages which extend beyond the mere existence of a society. It is an open forum providing a testing ground or developing ground for new ideas. The many unofficial contacts and discussions of common problems work toward better operations within any one Service. Then of course, the individual contacts speed up staff production within a Service or between Services; it is a great assistance in staffing a paper to know your counterpart in another Service, and to know that you can make use of your common background.

We have made progress this past year in other ways than in membership and in chapter increases.

We have placed the magazine on a firm quarterly basis. We have initiated through the energetic efforts of Mr. Dunlap, our editor, the sale of advertising in the magazine, as you will note from the latest issue. We have done this as good business, to produce greater revenue. As a matter of fact, the Society has been operating at National Headquarters on a shoestring since the beginning. We should raise the dues,

and we will propose such a move at the business meeting.

We have started a Quarterly News Letter. We hope to keep this up, if we can continue to have you furnish us with notes of interest from your chapters. We need news -- we need good articles for the magazine. We are sound; we are growing; we are looking toward new horizons too, at your National Headquarters.

Speaking of advantages, one advantage I have as President is that I am not a speaker. I announce the theme of the conference, and let our distinguished visitors take over. The theme of this conference is: NEW HORIZONS OF COMPTROLLERSHIP IN THE ARMED FORCES. . . . I would like to read to you a telegram to show you that we are a National Society, that we have received national recognition, and to impress on all of you that we have the basis for pressing forward to an organization that can be really and constructively influential in the improvement of operations of our Armed Forces.

Telegram--From the White House, Washington, 17 October 1958.

To: Lieut. General William S. Lawton, USA
President American Society of Military Comptrollers
Care of Kenneth E. Dunlap
516 North Oxford Street, Arlington, Va.

Please give my greetings to those attending the second National Convention of the American Society of Military Comptrollers.

As our defense budget reaches its highest peacetime level in our history, the task of the Comptroller grows in complexity and magnitude. Your responsibility to the people of America, accounting for the disbursements of the Armed Forces, is an essential part of effective military planning for our Nation's security and the common defense of the free world.

Best Wishes for a fine Convention.

DWIGHT D. EISENHOWER

We appreciate greatly this message from the President of the United States, which should inspire us to great efforts in this important field of government....

(End of opening remarks)

General Lawton was assisted during the Convention by the following presiding officers at the several sessions:

Rear Admiral G. F. Beardsley U.S.N., Deputy Comptroller of the Navy; Vice President of ASMC.

Dr. Claude D. Baldwin, Assistant for Systems, Office of the Comptroller of the Air Force.

Colonel A. E. R. Howarth, USA, President of the Washington Chapter, ASMC.

Mr. Leonard W. Hoelscher, Deputy Comptroller of the Army.

(Background remarks introducing speakers omitted to save space.)

It is planned to report on modifications to the National ASMC constitution in the March 1959 issue of this publication. Over 100 different individuals from localities as far away as Germany and as close as the Pentagon were in attendance.

Digest of Speakers' Remarks

Honorable John M. Sprague, Deputy Assistant Secretary of Defense (Comptroller), in Address: "Opportunities of the Military Comptroller"--given 23 October 1958:

The number one responsibility of the Military Comptroller in my humble opinion is to insure to every extent possible that we maintain a fully capable military posture.... I have noticed that budget and appropriation considerations take priority over cost accounting in the Department of Defense. Most unique to me is the fact that you charge military pay and allowances to one global cost account rather than let such costs follow through to the benefiting activity.... A more realistic picture of your functional costs and operating efficiency would be developed if your military manpower costs were charged to the benefiting activity. Possibly the price you would have to pay for such an industrial conventionality outweighs its promise of usefulness. ...Speaking generally of idle reserve capacity, I do not feel it inappropriate for the Comptrollers to examine such unused capacities in the light of changing weapon and weapon delivery systems.... Speaking of training, I would like to commend you gentlemen for the job you are doing in the field of Comptrollership and fiscal management.... I am sure that one of the areas of great concern to you gentlemen and others of the Department of Defense management is the dollars tied up in surplus consumables, military hardware, industrial tools, idle plants and bases....

J. Sinclair Armstrong, Assistant Secretary of the Navy (Financial Management), in address: "Fiscal Evolution in the Navy under Congressional Direction"--given 23 October 1958:

"As you know, the legislative effort toward the betterment of financial management may be, like Gaul, divided in three parts, namely, cost based budgets (P.L. 863, 84th Congress, Section 1), accrual accounting (Ibid, Section 2) and annual accrued expenditure limitations (P.L. 85-759, Section 1(c)). However the determination of which of the three is the greatest or, for that matter, will require the greatest effort, is difficult to determine.... recent legislation which provides for the establishment of accrued expenditure limitations seems to suggest that it is necessary to establish an accrual accounting system before such limitations may be included in a budget request.... From this, one would be tempted to say that the initial problem of meeting the standards established lies with the accountants rather than with the budget analysts.

Yet this is not the full fiscal picture, for the creation of any accrual accounting system requires that it support and be consistent with a previously-established budget structure... During such a period (of reorganization and change in budget structure), and we are in such a period now, the efforts of accounting reform cannot progress until the pattern of budget change, both of classification and organization, has unfolded.... If the budget structure which finally emerges requires that its initial break be made by budget category, additional subdivisions will have to be made at lower levels to permit distribution and control within the current organizational structure of the Department.... If we assume that the budget structure can be finally evolved in a form satisfactory to all concerned, and repeated changes through the succeeding years avoided it should become possible to evolve an accounting system which has as its end the reporting of fiscal events on an accrual basis. However, it must be remembered that the accrual method of income reporting by industry has, as its consideration, the measuring of income in a period against costs which are properly assignable in such period. Proper assignment of such costs are measured in many cases by the extent to which such costs have contributed to the profit generated in such period. Since the generation of profit is not a criteria in the control of public funds, only that part of the accrual system, used by industry should be employed as permits a proper evaluation of the use of assets afforded any public agency, whether such assets be cash or other property.... However this phase (phase II of accrual accounting) must give full consideration to the requirement of Public Law 85-759 which contemplates that all accrual systems of accounting will properly reflect accrued expenditures as defined by such legislation. Unfortunately, the definition contained in this legislation does not afford an adequate means for promulgating a simple system of accounting which would reflect the incurrence of accrued expenditures. The definition adds to goods and services received, advance payments made and progress payments due. It would appear that the better approach to the problem would be to accept the existing patterns of recording the events of receipt of goods and services as the means by which accrued expenditures are controlled, rather than establish a system of accounts based upon the general concept found in the legislation. In establishing phase (II) of the modified system of accounting in the Department of the Navy, this approach was accepted.... Examples of the adjustments that could be made as a result of this approach are as follows. Instead of minutely examining each situation to determine when title passes so as to determine when receipt actually occurs, the current documents which form the basis of evidencing receipt before payment of vouchers could be considered sufficient for this record. Also, instead of determining when progress payments are due,

vouchers of progress payments could be the sole documentary evidence required to reflect this fact. Similarly, in all other areas where liabilities are established which form the basis of an accrued expenditure, the current documentation could be continued and form the basis of the record required. Since advance payments are not truly accrued expenditures, some consideration must be given for their exclusion, even though the legislation defines advance payments as accrued expenditures.... Programs cannot be properly evaluated by the legislative or executive branch unless a system of accounting is consistently energetically and skillfully applied to show whether or not the funds made available were employed as economically as good financial management would require. Where profit cannot be a measure of financial success, then cost information must become the test."

R. G. Lochiel, Senior Vice President-Finance and Treasurer, Capital Airlines, Inc.,--address given 23 October 1958:

"Perhaps it is now in order that I summarize some of the characteristics required of an aggressive Comptroller:

1. He must have leadership ability.
2. He must be impartial in his dealings with others.
3. He must know the business with which he is dealing.
4. He must have a sense of fair play.
5. He must have confidence in himself to gain the confidence and respect of others.

...We had an entirely new type of aircraft (British Viscount) on the American scene and we were doubling our fleet in the short period of two years.... He (Comptroller) had to satisfy of the necessity of each added cost and of the over-all equality of productivity standards applied to the various departments.... In the airline industry you do not get a price increase by deciding one is necessary.... First he (Comptroller) must lead in preparation of the economic case to be presented to the Civil Aeronautics Board.... During the past two years, our Comptroller and members of his staff, have made four different appearances as witnesses in this fare case.... The second basic responsibility was to prepare the company for a period of continuing profit squeeze.... He (Comptroller) cannot accept standards which would lower company's standards nor can he accept standards which are too lenient. If we lower our standards of service we will lose our customers. On the other hand if standards are too lenient excessive cost levels will develop."

Colonel Richard Loomis, USAF, Deputy Director of Accounting and Finance, Office of the Comptroller of the Air Force, in address: "Aero-Space Power and the Comptroller," given 23 October 1958:

"We (comptroller staff) are the people who sit between the planners and the doers.... In the Air Force language, Aero-Space means "pertaining to the Earth's envelope of atmosphere and the space above it".... In considering aerospace power the major inescapable fact for each of the services is fantastic cost.... What we (in the Air Force) want is to have fewer people tied up in operating the financial management system...accounting and finance...we are putting these separate activities into one and we are writing procedural instructions that will give us straight line processing of a single document to result in a single record...they (Air Force auditors) began to participate in formulating remedial action.... Regarding our budget effort... I would suggest that we get this legislative business, particularly proposed legislation, centered right in the cross hairs.... We are long past the days when we could state "so many people, so many meals, so many uniforms, so many installations." We cannot deal in numbers, as we have done so frequently in the past. We need a radically new technique.... We are all using electronic gadgets to price out our programs... it is mighty difficult to price out a weapons system that is not much more than a gleam in the engineer's eye.... Each of us should now be tackling the problem of how to procure the money that will procure the tools of national survival.... We know that the shooting outfits are gradually moving under the Joint Chiefs. We, as individual services, retain the responsibility for support of the combat effort.... I suggest that we have had enough hard knocks in the budget area to teach us one solid lesson -- be uncompromisingly honest. When we are forced into an estimating process...without any experience factors and without many facts, let's say so.... We are trying to procure the money that will provide the minimum tools that will insure national survival.... One of the new (JCS) functions is to provide a mechanism for reviewing proposed programs and resource requirements of the unified and specified combat commands. Then JCS must make broad recommendations as to program levels in connection with the development of annual budgets.... I believe if JCS becomes effective in this area it will have a profound influence on budgeting procedures and responsibilities in each of the services. The point I want to make is this -- the Comptroller should be starting now to participate in the planning for the implementation of this new JCS function.... Here I think we can profitably look at our relations with OSD. We have good formal relations.... We should develop a more informal relationship on what is going to happen.... Our (comptroller area) job is to devise the best possible systems for today's and tomorrow's

requirements. If industry comes up with equipment that supports our system--and they will-- then good; we will buy it. But even before we buy--let's look once more at our system, to be sure it is necessary for today and tomorrow.... The point I make here is that the Comptroller must get to the edge of space. He has this responsibility to the people that must decide whether we will or will not go ahead and build enough parts of a proposed weapons system so that operational suitability testing can take place.... It seems to me that any National Convention must have some serious papers for consideration....

TEN COMMANDMENTS FOR COMPTROLLERS

1. Budget: Remember, always, that control of the purse strings is a responsibility to your brothers; use your control as a helping hand, never as a club.
2. Accounting: Be not satisfied only with proving the money was used for the purpose provided; but arrange thy books to help the brethren each to manage better his own affairs.
3. Finance: Be humble in the parceling out of cash; ever remember it was not you that provided the shekels.
4. Reports and Statistics: Hunt not for gnats in thy brother's statistics; be sure thou hast winnowed the June bugs from thine own.
5. Auditing: Write not complaints on thy brother's efforts, unless you first show him a better road to travel.
6. Organization: Help your brothers; and climb not toward the blazing sun of a comptroller empire for thyself, lest thee burst thy toe on the rocks of realism.
7. Management: Thou shalt not manage thy brother's business; show him how you can help him. Bend thine efforts always toward the goal of Can Do; and waste not thy time proving No Can Do.
8. Analysis: Help thy brothers to use analysis for their own betterment; counsel those who would do their own; and encourage the unenlightened to join the flock.
9. Application of Mathematics in Comptroller Functions: Verify thy inputs; utilize the outputs; and mistreat not the iron monster, but feed it carefully; that is may sustain you in your time of tribulation.
10. Related Activities: Covet not the opportunity to make speeches about the Comptroller concept.

In closing I want to deal with the specific barrier which faces the Comptroller; when I talked earlier about Aero-Space power, I expect that some of you thought of the different barriers that we have faced in our initial steps.... First, it was the sonic barrier...we broke this barrier. Next, we were faced with the thermal barrier...we are well on the way to whipping this one completely.... To me, the major barrier in the Comptroller business is that of tradition.

...I think one of the biggest difficulties is that what we sometimes look on as tradition also has a legal foundation...sometimes this legal foundation is based on enacted law and sometimes it is based on administrative law. I believe that the Comptroller must tackle this tradition barrier and I believe he can break it in an evolutionary manner of course.... The people who prescribe the administrative law, and we have representatives here in this room, are reasonable people. All they have to see is an easier, better and honest way of carrying out our responsibilities. ...The laws enacted by Congress which govern the conduct of Comptroller affairs present a more difficult problem but we have succeeded in changing enacted law in the past.... Comptrollers cannot be satisfied to sit back and wait for higher authority or elected bodies to do this job for them. It is our job, our immediate job, to devise new techniques to keep pace with our technological combat developments. The next job -- to attain this horizon -- is to sell our new techniques.... Gentlemen, to me these are the comptroller horizons in the Aero-Space age....

Brigadier General F. L. Wieseman, U.S.M.C., Fiscal Director, United States Marine Corps in address: "Principles of Financial Management in the Marine Corps"--given 24 October 1958:

"In addition to the language of the dollar sign, which is a common denominator for all of us, we have many other things in common.... Yet with all the similarity, I know that there are differences between the services and, in fact, differences even between the two services within the Department of the Navy. Most of these differences are due to organizational concepts which, as we all know, stem from history, tradition and missions.... As a result, in addition to the differences in operation, which can be attributed to variations in organization, there are, I believe, differences in concepts.... It is our policy that only the commander, who is responsible for everything his command does or fails to do, shall have final decision in all matters.... The comptroller is a general staff officer...his interests cut across many fields of staff interest.... We require all of the staff to participate in financial management...it is the Marine Corps policy that only a life officer with broad command and staff experience shall be detailed as comptroller...(exception at supply installations)...our policy prevents repetitive tours in financial management.... Our fear of course, is that these officers will become so enthralled with the mechanisms of financial management that they will lose sight of their primary function which is to discharge our combat responsibilities.... We try to keep the cognizance for financial responsibility at the highest feasible level while at the same time extending financial consciousness to the lowest level.... It may be of interest that the Marine Corps position is such

that we do not set forth detailed procedures for financial management. We still adhere to the old principles, which we still consider valid -- that only the man on the ground can best determine how his command shall be administered and commanded...."

Mr. John H. Prince, Fiscal Assistant Comptroller, Headquarters United States Coast Guard; Past President of Washington Chapter gave on 24 October 1958 "An Objective Appraisal of Appropriation Expenditure Limitation." This address was made from outline memoranda and while not subject to direct quotation herein represented an essential contribution to Convention discourse in the subject field. The items discussed dovetailed with, however, without duplicating, the items included in Secretary Armstrong's previous address. The mistakes of the past are reflected in the controls of the present, comptrollership and other interested management areas must shape and influence proposals for corrective action in the future; otherwise by default we will continue to have control mechanisms imposed upon us which might have either been avoided or shaped in a more workable pattern. Such was the trend of Mr. Prince's well-chosen remarks.

Associate Editor's Note:

Lt. Col. Hugh F. Foster, Jr., GS, USA, Assistant Chief, Data Processing Systems Division Office, Director of Management Analysis Office of the Comptroller of the Army in an address:

"Comptrollership by Exception," reprinted in full in this issue, states "let us use the capabilities of Automatic Data Processing Systems to reduce our reporting requirements instead of increasing them!"--Address given 24 October 1958.

Closing Remarks --

Lieutenant General William S. Lawton, Comptroller of the Army, National President ASMC, 24 October 1958:

...I hope you all feel, as I do, that this theme was grasped and emphasized so firmly and enthusiastically by our speakers. They really gave us new horizons, new thoughts on utilization of the many facets of comptrollership, and the more efficient and broader utilization of the splendid talents that are available throughout the Armed Forces in the Comptroller field. If nothing else, the talks at this convention have convinced me that the concept of Comptrollership is still growing in the Armed Forces, still has more growth ahead of it, than we have behind it up to this time.

May I again express my appreciation to you who have been present and given your support to this second Convention. Although not present all at one time, I am sure we have had well

over 100 different people here in the last two days. I know the difficulties of getting here, and it is gratifying to see so many. I would like next year to see this hall filled, to at least double our present attendance, and I ask all to work toward this end.

As I remarked yesterday -- one year ago, we had 883 members; today we have over 1200, and I doubt if even the Secretary can give you an accurate number, as applications are coming in daily. That's a growth of over 35% in one year.

A year ago we had 21 chapters; now we have 27, with others indicating submission of applications in a matter of days or a few weeks. That's a 30% growth.

Next, I want to express at this time my appreciation for your confidence in re-electing me your President. (New officers shown on page v). I will do my best to serve you and this Society, and help you to help the Society spread its influence and assistance to the Armed Forces. I can assure you, you have active national officers in the Secretary, Treasurer, and Editor spots. I believe in the past few weeks I have signed hundreds of letters to Comptrollers at posts, camps, stations, shipyards, air bases, arsenals, and what not -- every comptroller in the Armed Forces, urging their membership and their support in the organization of a Chapter of the Society. I hope we can soon report results in the News Letter and in our quarterly magazine.

Which brings me to the next to last point I want to touch on. We had an amendment to the Constitution yesterday at our business meeting to raise the dues from \$3.00 to \$4.00 a year in FY 1960. It was amended to read FY 1961, with

the real purpose, I am sure, to see if we could weather the storm in some other manner. Let me say right now, that I am not unhappy at all at this amended amendment. The interest shown in the voting, the fact that you people from out of town representing many members in the hinterland, came in knowing the thoughts of your constituents in this regard, looking after their interests, to me reflected a very healthy situation. It should show our membership that we have a real Society, not just a handful of people sitting here in Washington trying to run your business for you -- it's the members' business, and the members' Society, and I hope you take that word back to them -- also I can't resist getting in the plug that, with this authority, goes responsibility, and as it is the members' Society, let's see them pick up the ball and get some top-notch articles in for the magazine, and newsy items of our members and chapters for the News Letter.

I think it fitting if now I close our second Annual Convention with the re-reading of an excerpt from the telegram we received from the President of the United States:

In the encouraging and stimulating words of the President --

"As our defense budget reaches its highest peacetime level in our history, the task of the Comptroller grows in complexity and magnitude. Your responsibility to the people of America, accounting for the disbursements of the Armed Forces, is an essential part of effective military planning for our Nation's security and the common defense of the free world."

There is your challenge, gentlemen.

COMPTROLLER SYSTEMS PROGRAMMING IN THE AIR FORCE

Dr. Claude D. Baldwin
Assistant for Systems
Comptroller of the Air Force

NEED FOR SYSTEMS IN COMPTROLLERSHIP

The Armed Services, as well as other agencies of the Federal Government, have been the object of criticism by various public administration groups, such as the first and second Hoover Commissions, and by various Congressional Committees, because of the lack of consistency and systematic relationships between budgeting and accounting and related financial management processes. In fact, one might say that recognition of the deficiencies in financial management systems in the Federal Government, particularly in the Department of Defense, has been a prime moving force which has culminated in the enactment of legislative improvements during the past two decades -- embracing such noteworthy financial management milestones as the Budget and Accounting Procedures Act of 1950; Title IV, National Security Act Amendments of 1949; Public Law 863, 84th Congress and Public Law 759, 85th Congress.

The Comptroller of the Air Force long recognized the need for eliminating the multiplicity, duplication and inconsistencies in Comptroller systems, procedures and operations, not only in budgeting and accounting but also in disbursing, statistical services, management analysis and auditing. Each of these major functional areas for which the Comptroller of the Air Force is responsible involves varied and complex procedures, many of which are governed by special statutes and administrative regulations. At the same time, each functional area, which in the Air Force is assigned to a separate directorate, must concern itself primarily with its own procedures and technical requirements, and no one directorate at Headquarters U.S. Air Force can be or is responsible for seeing that all of the technical procedures mesh into a coordinated, consistent operation. The Comptroller of the Air Force, in the exercise of his over-all direction and management responsibilities, must ultimately make the final decisions as to whether any specific procedure or technique is in accordance with his principles and policies and is workable, logical and effective.

Although much progress was made during the formative years of the Department of the Air Force, the continued growth and complexity of Comptroller responsibilities pointed up the need to provide the Comptroller of the Air Force with an organization whose primary responsibility would be to develop principles, policies, and related systems and procedures which would assist in the improvement of the over-all financial management system. In recognition of this growing need, the Comptroller of the Air Force

established, as a part of his immediate staff, a systems office with primary responsibilities for:

(1) Developing and establishing standards and criteria for evaluating the various proposals and procedures which are forwarded to the Comptroller for his decision. These standards and criteria set the basic principles, or ground rules, and provide necessary guidance to the directorates for systems development, thereby reducing unilateral, disjointed and inconsistent actions and projects.

(2) Reviewing the systems and procedures developed or proposed by the directorates and other Air Staff offices, to assure that these procedures are in accordance with the over-all financial management principles and policies.

(3) Insuring that the data produced by Comptroller systems is the type required by commanders to assist them in their management role.

(4) Analyzing and evaluating procedures and systems to streamline, simplify, and eliminate duplication among their various component parts. Since these procedures are normally contained in Air Force Manuals, the revision of the Comptroller Manuals to provide a more efficient and effective operation becomes a primary goal at all times.

NEED FOR A SYSTEMS PROGRAM

System has been defined as, "an orderly arrangement of parts or elements into a rational and coordinated whole." Comptroller systems has as its major role the integration and correlation of all Comptroller functional procedures into an effective, rational working relationship, one with the other. Action papers from the Office of the Secretary of Defense, changes in Public Laws, modification of requirements of the Bureau of the Budget, General Accounting Office, and Treasury Department (among others) as well as efforts to develop better systems within the Air Force, place many demands upon the time and effort of the systems staff of the Comptroller's office and Comptroller directorates. Determining which of the multitudinous actions should be taken first and whether approval of one policy or procedure negates or modifies another creates a constant problem and demonstrated the need for a formal mechanism or "system for systems."

Basically a systems program was needed to provide:

(1) an orderly method to establish priorities on a "first-things-first" basis;

(2) a mechanism to monitor the progress in major procedural and system areas;

(3) a regularized procedure to keep all interested personnel informed of progress and of problems which may have arisen;

(4) a means of communication not only among the members of the Comptroller's staff at Headquarters, U. S. Air Force, but also among the commands so that all are aware of guidelines, and future projects so that unified effort can be obtained.

PURPOSE AND OBJECTIVE OF THE SYSTEMS PROGRAM

The Comptroller Systems Program has been designed to serve as the formal guide or mechanism whereby the foregoing needs can be met. As a method or technique itself, the Systems Program does not provide the policies and procedures but rather serves as the vehicle for this development, orderly implementation and associated progress reporting to the Comptroller and directors. The objectives of the program are to:

(1) provide the field comptroller organization with improved and integrated procedures and systems in the form of Comptroller manuals, and

(2) assure an orderly phasing of the implementation of these procedures and systems throughout the Air Force.

FORMULATION OF THE SYSTEMS PROGRAM

In designing the formal Systems Program, certain basic concepts had to be developed and approved and various problems had to be solved -- both as to form and as to technical substance. One of the first problems was to determine in what logical arrangement and sequence of the subject matter the Comptroller procedures and systems should be organized and made available to the field organization. In solving this problem, it was necessary to develop a comprehensive outline of the entire series of Comptroller manuals covering every functional area for which procedures and systems must be provided. This involved examining over 45 manuals, more than 50 Air Force Regulations and Air Force Letters, and over 3,000 pages of nonstandard directives, (i.e., all major command letters, messages, military letters to one or more separate commands, etc., which changed standard publications but were not incorporated into any standard change to the printed manuals then in existence.) The next step was to reorganize the subject matter contained in these many sources in each functional area into a more logical and correlated arrangement. Thereafter this reorganized subject matter was broken down into a series of volumes dedicated to the proposition that a given volume (or manual) should first and foremost serve the convenience and purpose of the user -- not the convenience or vagary of the writer. The arrangement of the new manual series differentiates between those designed for

base level operations, those for intermediate and major command levels and those for Headquarters, U. S. Air Force level; this arrangement recognizes the fact that a base need not have copies of the procedures applicable only to higher echelons. Thus the cost of printing and distributing the series of manuals can be minimized by selectivity in distribution.

In the base level manual series, efforts have been made to break the volumes into segments most suitable for the normal organizational alignment found in the Air Force. For example, a volume will be promulgated for military payroll accounting separate from the volume for materiel accounting -- this segregation is based upon the premise that the military payroll clerks who prepare and maintain Military Pay Records and allied vouchers would rarely have need for the manual on materiel accounting.

The present program does not represent a final and rigid framework for the subject matter which will cover the vast and complex scope of all Comptroller procedures and systems. It is, and must be, sufficiently flexible to cover changes in policies by the Air Force or higher authorities and modification of requirements by other agencies as well as new or amending legislation.

A second problem encountered in the development of the program was suitable time phasing of the various and interrelated procedures to be included in the manuals. In the past, problems have been encountered in the field when a new procedure was received for implementation in one functional area without the essential and related procedures in other affected areas. Another facet of this problem was to develop a "complete package" of procedures which would in fact be implementable as a unit by the field without disrupting current operations.

Considering the above problems, the Comptroller Systems Program was divided into ten basic program areas. Within each of these program areas the implementable segments or "units" were arranged into Program divisions. Each Program division was then further divided into the various functional procedures which had to be developed. Projects relating thereto were then assigned to the responsible Comptroller Directorates within Headquarters, U. S. Air Force and Headquarters, Air Materiel Command.

The Program Areas have been arranged in a sequence to permit an orderly and rational implementation with a foundation of basic concepts as the first priority. This sequence arrangement does not necessarily place greater importance on one area over another, but is based upon the assumption that the procedures developed in one area may be essential as a foundation for the procedures developed in a subsequent area. A constant challenge is present to insure that the policies and procedures in each Program Area are compatible with and support the policies and procedures in each of the other areas.

Each Program Division covers the Comp-

troller policies and procedures which are closely related to a given subject and represents an implementable package. The determination of what constitutes an implementable segment carries with it, as basic to the success of the implementation work, the concept of priority--the order in which the system must be developed. Therefore, the Systems Program is arranged to reflect the priority and precedence of the subject matter of the procedures; first by areas, second by divisions, and third by the specific projects within divisions.

Each Program Division is broken down by specific functional projects. A project is identified with a particular Comptroller office or directorate responsible for the development, coordination and promulgation of the resultant procedures. Each project has as its aim the specific end product of a written procedure for inclusion in one of the approved manuals.

OPERATION OF THE SYSTEMS PROGRAM

In the operation of the Systems Program the Comptroller offices and directorates submit a Program Project Request covering each project. The project request provides a definitive statement of the work to be accomplished, identifies significant sub-projects and contains a justification of the necessity for the project. The project request also shows a proposed schedule including starting and completion dates for the development phase and an effective date for implementation. When the project request is approved by the Comptroller, the project is officially established as a part of the Comptroller Systems Program.

Monthly Project Status Reports are submitted by the directorate or office responsible for accomplishing the project. The report gives the progress during the month and identifies any problem areas in which Comptroller guidance or other assistance is required, or in which action is required by other Air Staff offices before further progress can be made on the project. These Project Status Reports provide a means of measuring and reporting progress to the Comptroller as well as to the Assistant Secretary of the Air Force (Financial Management), and other higher authorities, including the Congress, as required.

On the basis of the Project Status Reports and information gained through frequent contact

with project officers, periodic presentations are made to the Comptroller, directors and key staff members at Executive Control Meetings. Projects and other topics related to the program are selected for treatment in the meeting primarily on a management-by-exception basis. Decisions made by the Comptroller at these meetings may result in the time schedule of a project being adjusted and the schedule or related and interdependent projects changes correspondingly. This permits necessary revisions in the schedule to meet changing requirements, provides better coordination and contributes to a unified effort.

A portion of the work of the Comptroller Systems development relates to matters for which the Air Materiel Command is assigned primary responsibility -- such as central procurement of materiel, depot procedures, etc. Here the Air Materiel Command acts as the project agency with policy guidance and assistance from Comptroller offices at Headquarters, U. S. Air Force. By agreement with Air Materiel Command their projects have been made an integral part of the Comptroller Systems Program. Project requests and progress reports are submitted as already described. A Headquarters, U. S. Air Force directorate, selected on the basis of its functional interest in the subject matter, is assigned monitoring responsibility in the case of each Air Materiel Command project.

The Comptroller Systems Program is formalized in a program document which identifies each of the projects, divisions, and areas, establishes the guidelines, and shows the manual in which the procedures resulting from the project will be published.

The Comptroller Systems Program in the Air Force fulfills the requirement for a plan to make orderly, timely, rational progress in developing and revising Comptroller Systems. Its pre-determined objectives are based upon pre-determined policies.

It is an integrated plan in the sense that it represents the coordinated planning of all Comptroller directorates to move on a time-phased schedule toward pre-determined goals.

It is designed to provide end-products of value to all management elements within the Air Force as well as guidance and assistance in all Comptroller activities for better, more effective financial service to commanders.

COMPTROLLERSHIP BY EXCEPTION

Lieutenant Colonel Hugh F. Foster, Jr., GS, USA

(Address given before the Second National Convention of the American Society of Military Comptrollers, 24 October 1958)

Concerning the Author: Lieutenant Colonel Hugh F. Foster, Jr. is a Regular Army officer, who was graduated from the United States Military Academy in 1941. Naturally, he found himself shortly participating in World War II, and served in North Africa and Italy from 1943 to 1945 in Signal and Radar organizations.

Following the War, he was returned to the U. S. Military Academy, where he spent three years as an instructor in Electrical Engineering. During this period he also undertook related work at Purdue University, where he earned his M.S. in Engineering in 1949. His period at West Point was followed by a tour as exchange instructor in the same subject at the Naval Academy for two years.

Subsequently, Colonel Foster was Chief of the Operations Research Division of the Combat Development Department of U. S. Army Electronic Proving Ground at Fort Huachuca, Arizona. It was during this period that he was assigned as chairman of a group which developed the concepts of the application of automatic data processing systems to tactical organizations and Field Army situations. This experience provided Colonel Foster with a broad understanding of the characteristics and possibilities of automatic data processing systems, and it is this knowledge and experience which he will bring to bear in his talk this morning.

...The subject of my presentation this morning is "Comptrollership by Exception" -- at least that is what it says in the program. My real title is "Automatic Data Processing Systems as a Tool for Comptrollership by Exception," but that was much too long to put in the program. Perhaps it is just as well, for the abbreviated version certainly has more punch to it -- more "customer appeal."

I find it rather interesting to contemplate the present widespread infatuation with "catch phrases" and "quotable quotes." Everywhere one turns there is evidence of this obsession to tag our products with impressive titles -- and the more obscure the title the better. The proper degree of obscurity is often essential if funds are to be obtained to support the effort. Take the term "Operations Research," for example.

When I was introduced to operations research activities my first act was to seek a definition of the term. After several days of fruitless search I wrote a letter to a friend of mine who worked for the Operations Research

Office of Johns Hopkins University, asking him to give me a definition. He replied with three typewritten pages of definitions obtained from his reference library, and the suggestion that I pick any one I liked, since none of the definitions had achieved widespread acceptance.

The most universally accepted definition, so far as I know, is attributed to Dr. Ellis Johnson, Director of the Operations Research Office of Johns Hopkins, who allegedly voiced the viewpoint that "Operations Research is what operations researchers do."

Despite these vague generalities, the combined civilian and military interests in this country are presently investing many millions of dollars in operations research each year. This is a lot of money any way you look at it. It is even more impressive when you consider that the term "operations research" had its origin about 1939, and was relatively unheard of in this country until the early nineteen-forties. The intangibles and the aura of mysticism associated with operations research have certainly served to whet the public interest and loosen the purse strings. For several years the term "operations research" was magical in its effects, especially insofar as approval of projects was concerned. If these words could be worked into the discussion somehow -- even remotely -- the probability of approval of the project was enhanced tremendously. Nowadays, of course, the term has become more commonplace, the really valuable results of operations research are better appreciated, and the glamour of dealing in a mysterious field has largely vanished due to the fact that now almost every engineering college offers courses in the subject, and many firms have made it a profitable practice.

This is not to imply that operations research is any less effective than it was ten or fifteen years ago. On the contrary, development of new techniques have enhanced the value of the operations researcher manifold. The very simple fact of the matter is that the term has become familiar to thousands, and referral to operations research in speeches and published papers is no longer, in itself, sufficient to insure widespread reception. Instead, some new catchphrase is needed.

One of the prime contenders for this dubious distinction is the term "automatic data processing systems." This is indeed an intriguing concatenation of mellifluous (linking and smooth flowing) prose, and like operations research, this technique had its modest beginnings in the early nineteen-forties.

By using a very liberal interpretation of the term, automatic data processing can be

traced back hundreds and thousands of years. The high-speed electronic devices of today, however, have evolved mostly in the past ten years. The continued phenomenal growth of this field, and the carefully nurtured publicity which has accompanied this growth, have kept the term "ADPS" on the public tongue and in the public eye. ADPS has thus achieved the stature of a mystical cure-all for a wide variety of ills. Undoubtedly some of the glamour now attached to ADPS is the direct result of the fact that many of the earliest uses of computers were in connection with operations research, and the two terms now share the limelight.

The automatic data processing system of today is indeed an awesome assemblage. The accomplishments of a modern high-speed computer are well nigh incredible, particularly when one considers the relatively small amount of observable action which takes place. There are few moving parts, so the casual observer can see little happening. Off to one side a reel of tape may be observed to spin at a high rate of speed for one second. There is nothing to show that in that one second 60,000 characters of data were read from the tape, transferred to the working portion of the central data processor, checked for accuracy, and stored in electronic pigeonholes in accordance with a carefully conceived plan.

On the operators' console a few indicator lights flicker briefly and then stabilize in a set pattern. This is the only indication that the computer has just added 250,000 ten-digit numbers.

At one side of the computer a high-speed printer may go into action momentarily. If it is a mechanical printer it will print relatively slowly, probably not more than 1,300 characters per second. A photographic or xerox-type output, however, can be obtained at the more respectable speed of 10,000 characters per second.

Electronic storage techniques allow us to store information very compactly. 6,000,000 characters of data can be stored in a few cubic feet, and any one of those 6,000,000 characters can be located and made available for use in less than half a second.

As I have indicated, the high-speed computer is indeed a marvelous machine. It has been called a giant brain -- and it has been called a magnificent moron. It has also been very accurately described as the only machine yet invented which is capable of delivering 20,000 wrong answers a second.

Actually, a high-speed computer is nothing more or less than a tool -- a tool which can create intricate and finely detailed products at fantastic speeds if it is provided with accurate data and precise instructions as to what to do with the data. This need for precise instructions is the greatest problem facing users of computers today. The precision and detail required in a program of instructions for a modern high-speed electronic computer is most difficult for the uninitiated to comprehend.

Most of us are accustomed to dealing with people -- people who understand implied meanings, and who function effectively in response to fragmentary instructions. As a general rule we do not appreciate the benefits we enjoy from this relationship. Consider, for a moment, a command like "bring me the Johnson file." Execution of this command involves 8 actions, 7 of which are implied but not stated. The person addressed must:

1. stop what he or she is doing
2. go to the file cabinet
3. select the proper drawer
4. open the drawer
5. search the files for the Johnson file
6. extract the Johnson file
7. close the file drawer
8. bring the Johnson file.

Obviously each of the seven implied actions is in fact a system of related sub-actions. For instance, selecting the proper file drawer necessitates reading the title on the label of the first drawer, mentally comparing the title with the category of information desired, accepting or rejecting the drawer, transferring attention to the next drawer, etc. Without going into this any further I am sure you can see that execution of this simple command generates several progressive levels of dependent actions. A description of the over-all process merely to the point of recording every movement an observer could note would produce a list of between 500 and 1,000 discrete movements -- and this would not begin to indicate the numerous unobserved muscle actions required for each movement!

When we begin to analyze operations in this much detail we begin to learn many new things about these operations. Data processing analysts have found that there are usually at least three different versions of the way any operation is performed. "Management" will state how the job is supposed to be done -- "Labor" will state how the job is done -- and actual performance will be something else again.

Fortunately for all of us, such detailed instructions are not normally required in our daily life. A high speed computer does require such minutely detailed instructions, however. A conventional payroll calculation, including determination of base pay, overtime pay, withholding tax, union dues, hospitalization, and the other usual deductions may easily require 10-12,000 instructions! When you consider that a good programmer will turn out about six valid instructions an hour, at a cost of about \$2 - \$2.50 per instruction, you perhaps begin to understand why everyone does not use a computer.

Any time you think that you completely understand a mildly complex procedure just try to write a computer program for it. It will prove to be a very educational -- and probably discouraging -- experience.

My purpose in quoting these facts and figures is not to overwhelm you, but to bring forcefully to you that fact that the high speed

electronic computer and its associated equipment represent an extremely powerful tool which can be available to us if we are smart enough to use it.

All of the armed services have aggressive programs to adapt the capabilities of ADPS to their particular needs and desires. In the Army we use large numbers of these computers in scientific research, as do the other services. The Army embarked, more than two years ago, on a massive program to develop automatic data processing capabilities for the tactical forces in the field. This is no small program, either in terms of money or in terms of vastness of the concept. This tactical ADPS has necessitated a tremendous research and development program in the equipment field, because literally none of the commercially available equipment was suitable for use in the field. The concept of employment envisages an integration of data processing functions on a scale never before attempted in the entire history of computers.

The Army also has established an aggressive program for utilization of ADPS in business-type operations. There are numerous installations for single-purpose data processing, such as depot supply operations and finance and accounting operations. We have just completed a two-year study leading to integration of a variety of administrative functions at Army posts, and by the early part of next year we expect to have the prototype installation in test operation. You may think this is slow progress. Believe me, establishment of computer installations is a slow process....

From the foregoing it is evident that computers and automatic data processing are not new to the Army, and yet there is at least one area in which ADPS is conspicuous by its absence. I am referring to comptrollership.

I am not referring to the "money counting" and "bookkeeping" aspects of comptrollership, but rather to the management analysis and management engineering aspects of comptrollership. The term management engineering implies that there exists a sound, systematic and logical methodology which provides the basis for our engineering activities. If this is the case -- if we are really engineering management -- the potentialities of automatic data processing present a great challenge.

An automatic data processing system is ideally suited to problems whose solutions require systematic application of logical processes to soundly conceived methodologies.

When we undertake the analysis of the management structure and operations of an organization or agency, we presumably have a carefully studied methodology, established criteria, and a logical procedure. To the extent that this is not so, we are not doing management engineering. To the extent that this is so, we may be able to make profitable use of a computer.

"Management by exception" is an accepted management practice today, and it exists because

the availability of information far exceeds the capacity of management to use it effectively. The tremendous capabilities of an automatic data processing system can generate data and information far beyond our needs, and it is self-evident that the only way in which a high-speed computer can be an effective management tool is as an integral part of the "management by exception" program.

Since comptrollership is, in essence, management of management -- and since ADPS has proven itself of value as a tool for management by exception -- we can conclude that ADPS can be of value as a tool for comptrollership by exception....

If we can define the methodology in minute detail, set forth the procedures in a logical manner, and provide finite criteria for control of the logical processes and for evaluation of the results -- if we can do these things, it is most probable that a computer can be programmed to perform these evaluations for us.

I am not implying that computers will take over the entire function of management analysis and management engineering. I am merely suggesting that in ADPS we have a tool which is ideally suited to management by exception.

Surely the armed forces are not so poorly organized and managed that every element of every echelon requires 100% re-design every year. It therefore behooves us to use every technique at our disposal to detect the trouble spots and concentrate on them, thereby avoiding fruitless analyses where they are not needed.

Possibly the reason we have not yet made real utilization of ADPS in our management functions stems from our inability to see clearly just how we can gainfully employ this tool.

Since the theme of this Convention is "new horizons of comptrollership in the armed forces," let me project a few years into the future and try to illustrate how I envision an automatic data processing system could be put to good use as an aid to comptrollership by exception. Let me set the stage for a hypothetical example:

Let us suppose that the present Army program to expand the business-type operations of ADPS has been implemented, and that every major post has a data processing center. Let us also suppose that each block on the organizational charts of the post has been assigned a number in accordance with a special coding system. This coding system is such that every block has its own unique number, and this number indicates the command level of the block and identifies every superior block in the chain of command.

Assume also that the conventional paragraph-and-line identification of our personnel authorizations have been keyed in with the aforementioned block numbering system.

Lastly, since supposing is cheap, let us suppose that all of this information is available in computer language in the post data processing center, along with the military and civilian

personnel files and other data files customary for normal operations.

I will now try to depict for you the events that would transpire in connection with the annual review and analysis of the post organization and operations.

Just before noon the management analysis and engineering team from the Department of the Army arrives on the scene, complete with overnight bag and a couple of reels of computer program tape. These program tapes contain all the information required to run certain management evaluations on the post computer. The tape was prepared in Washington, and contains standardized computer instructions for standard evaluations. It also contains all measurement criteria, plus instructions which will cause the computer to make those special evaluations which are of particular interest at the time. (You see, under this method, how easy it is to incorporate "special subjects for investigation," just as the Inspector General does.)

After the initial formalities with the Commanding Officer, the management team toddles over to the data processing center and gives the supervisor the program tapes and any necessary instructions. The team then proceeds to the BOQ and sets up light housekeeping.

About an hour later, after lunch with the C/S, the team stops in at the data processing center and receives the first portion of the management evaluation. This might include, for instance, an evaluation on the span of control throughout the post. This evaluation would be in the form of a printed list of all elements of the post organization which did not meet the established criteria, together with an indication of the nature and magnitude of the discrepancy. Cross-checking this list with the master organization chart, the management team would find logical reasons for some of these conditions, and these items would be crossed off the list. Items remaining would then be studied more closely by the team.

A second portion of the computer report might pinpoint all locations where the ratio of action officers to secretaries did not come within established boundaries. A quick check of the organizational charts would indicate those areas where the deviation was permissible, and the analysts could then concentrate their attention on the areas that really needed examination.

The next portion of the report could be an evaluation of the grade structure within each organizational element to determine all positions filled by persons of higher grade than was authorized. Again only the exceptions would be reported.

Subsequent portions of the computer report would highlight exceptions according to such criteria as (1) correspondence of job authorization and individual qualification, (2) amount of overtime work performed during the preceding period, (3) proper ratios of grades within each element, (4) overstrengths and understrengths, (5) local requirements for periodic reports,

(6) ratio of stockade prisoners to guards, (7) hospital bedspace utilization factors, and (8) implementation of the incentive awards program.

Let me emphasize that the computer report would contain only the exceptions to the established criteria.

After appropriate analysis of the report the chief of the management team returns a revised copy of the report to the data processing supervisor with necessary instructions to achieve further detailed reports. It is now close to quitting time, so the entire team retires to the officers' club to conduct a time-and-motion study on the bartender.

The following morning, after breakfast, the team again repairs to the data processing center, and there receives the "second phase" reports. These reports, in addition to identifying the exceptions, also provide such information as the name and grade of the individuals involved, together with office location, telephone number, immediate supervisor, and detailed job description. Armed with this information, the chief of the management team makes prompt work assignments to the members of the team, and they fan out over the post to the designated areas.

Obviously an approach such as this conserves the time of the team by concentrating their efforts on the "sore spots" and by-passing areas which are not in need of close scrutiny. This in itself is a handsome reward for the cost of a few hours of computer time, but there is still another benefit to be derived.

When the team has finished its analysis and evaluation of the post organization, and has prepared its recommendations, the team chief delivers a draft copy of the recommendations to the supervisor of the data processing center. The changes recommended by the team are coded into computer language and another computer evaluation is performed. The results of this re-run are furnished to the management team, and the team can compare these results with the results of the initial computer evaluation. The effects of the team recommendations can now be observed, and further modifications can be tried if desired. ("War Gaming" of management.)

When the chief of the management team is satisfied with the recommendations, he turns them over to the data processing supervisor, and the team members proceed to the BOQ and pack their bags. By the time they are ready to leave, the data processing center has run off the team report, so the team chief recovers his program tapes, picks up the report, and delivers it to the commanding officer as the team has its exit interview.

Now, this is all imaginary -- and in keeping, I hope, with the theme of this convention. But I see no good reason why such events cannot take place, even with the state of the computer art as it exists today.

Of major importance, however, is the fundamental concept that the data processing sys-

tem did not perform the analysis. It served merely as a valuable tool which contributed to a more efficient and effective job by the management team. In so doing the data processing system was a valuable aid to Comptrollership by Exception.

By selecting management engineering as the subject for my illustration, I do not mean to imply that other activities in the realm of comptrollership cannot also benefit from the capabilities of a high speed data processing system. Certainly, in the years immediately ahead of us, we should make every effort to use this powerful tool in the areas of program control, analysis of accounting procedures, budget planning and analysis, and reports control (to name a few).

This seems like an opportune point to slow down and take a look at the other side of this shiny new coin. I would be remiss in my responsibilities to you if I failed to point out some of the disadvantages and pitfalls associated with operation of high speed automatic data processing systems.

In the first place, these systems are expensive. A medium scale computer installation, including all necessary ancillary equipment, may rent for upwards of \$30,000 a month, not including personnel costs, site preparation, and many other factors. A large scale system will commonly rent for more than \$100,000 a month. With rentals of this sort you can readily realize that operations of these installations are conducted at a fast and furious pace. Utilization of the facility is planned with utmost precision to insure against time loss, and the time required to pick a pencil up off the floor begins to assume the proportions of a financial catastrophe.

Another inviting pitfall into which the unwary may easily tumble is a very logical outgrowth of the tremendous capacity of the computer to print out reams and reams of data on demand....

Consider the quarterly report problem for a moment. Because of the time required to prepare these reports and the time required for intermediate headquarters to review the reports and take any necessary action, the information contained in these reports is frequently two months old by the time it reached the Department of the Army. This information is then used at D/A level for another three months, until the next report arrives. The net result of this is that D/A, on the average, is working with information that is 3-1/2 months old.

With ADPS available, however, some important changes can be made. The reports can be prepared and processed so fast that they are seldom more than two weeks old when they reach D/A, so the D/A staff is now working with data having an average age of 2 months. Things are looking up!

The trouble is that someone may decide that since it is now so easy to get these reports we ought to get them every month, and be really up to date. "Up-to-the-minute data for management" is a customary cliché. This will give

the D/A staff data which averages only one month old!

The point so easily overlooked is that the D/A staff was apparently able to perform satisfactorily with 3-1/2 months old data under the old system. (If not, the quarterly report would long since have become a monthly report.)

Why not use the benefits of ADPS in reverse and cut our reporting requirements from quarterly to thirdly?

If reports were submitted every four months, with a two-week delay in transit, the average age of the data available to the D/A staff would be 2-1/2 months. This is considerably better than the original 3-1/2 month average age prior to ADPS, so it should certainly meet the operational criteria of timeliness. At the same time, the reporting requirements from the field have been cut by 25%, and since we will be using expensive computers to do this processing, such a saving can be appreciable.

In other words, let us use the capabilities of ADPS to reduce our reporting requirements instead of increasing them!

Another unhappy fallacy associated with the use of high speed data processing installations is the premise that the data processing system is not doing its job unless it is printing out reams and reams of reports for management. A high-speed computer can turn out a Washington telephone directory full of new data every half hour or less -- but where can management get the people to read a Washington telephone directory every 30 minutes, let alone analyze the contents, and make management decisions?

The answer is obvious -- management by exception -- or, in our case, comptrollership by exception.

There is a story (supposedly true) dealing with a soldier who was about to board a transport during the early stages of the last war. A representative of the Inspector General's office stood at the foot of the gangplank querying each soldier as he passed, and when the subject of this story approached the inspector asked him "Soldier, have you completed basic training?" "Yassuhl!" "Are you qualified with that rifle you are carrying?" "Yassuh, ah sho am." "Fine. Then you're ready to go overseas and fight for your country?" "Well, suh, ah ain't ready -- but I'se willing to go unready."

The moral of this story may well bear some serious thought. Perhaps we in the comptroller field are not yet ready for the powerful assistance of automatic data processing on the scale I have described. But believe me, we will never reach our goals if we do not start out "unready."

Computers will not solve all our problems, and they will generate some new ones, the likes of which we have never seen before. Computers are a powerful tool, but their power and complexity must not blind us to their capabilities.

If we are to attain these distant horizons of comptrollership in the armed forces, we must exploit automatic data processing as an aid to "Comptrollership by Exception."

FINANCIAL-MANAGEMENT OF DEPOT MAINTENANCE
at the
MARINE CORPS SUPPLY CENTER, ALBANY, GEORGIA

Lieutenant Colonel Richard L. Moore

It is generally recognized that one of the biggest headaches for a maintenance executive is to convince higher management that he has insufficient manpower, or that a particular function is essential and should be added to his maintenance organization. This particular area for headaches now has a big-brother, which is also generally recognized as a creator not only of headaches, but pains to other parts of the anatomy as well; this is the area of financial-management in support of maintenance operations. It must be recognized that such pains are man-made and not attributable to the lack of health inherent in any well planned and properly executed financial-management program, which is essential to a smooth-running, well-oiled organization.

One example of a healthy financial-management program in 5th echelon maintenance support is in existence at the Marine Corps Supply Center, Albany, Georgia. Although the program is in its infancy (about three years old), it is worth writing about in view of its youth and its outstanding success.

The Marine Corps Supply Center, Albany, Georgia has an important role in the over-all logistics support plan of the Corps. It is the principal source for supplies of all types and classes, except fuels, aeronautical materiel, ammunition, and subsistence. This supply-support is for all Marine Corps units east of the Mississippi River and units in the Atlantic and Caribbean area. In addition, the Albany Supply Center has the mission of providing such units with 5th echelon maintenance support.

The 5th echelon maintenance portion of a Supply Center's mission is carried out by one of the Center's divisions, the Repair Division. The mission of this Division can be succinctly summed up as "the operation of facilities to provide maintenance of all classes of Marine Corps equipment as may be directed." Within this general statement are included such specific functions as:

- a. Accomplishing emergency programs in direct support of urgent Fleet Marine Force field requirements.
- b. Returning unserviceable Fleet Marine Force material to serviceable condition through modification, repair and rebuilding.
- c. Supporting the supply mission of the Supply Center through modification, minor repair, and maintenance of material to be issued or stored.

The foundation of the Repair Division's annual program is built with a product-mix of equipment established on the basis of an annual program tailored to fit the logistic and readiness requirements of the Atlantic Fleet Marine

Force. The basic premise is that the Fleet Marine Force annually rotates to the Supply Center sundried equipment which has become unserviceable through use or which has met predetermined age/use criteria and are thereby eligible for rotation.

Prior to evacuation of the used equipment, serviceable replacement end items are issued to the Fleet Marine Force units. This procedure ensures that the high degree of materiel readiness required for the Fleet Marine Force will be maintained, and relegates the remainder of the program to the logistic agencies. The only exception to this procedure is in those few cases where available stocks are not adequate to effect replacement; under such circumstances the end item is evacuated without replacement and is accorded the highest priority for repair and return to service.

The evacuated items which have been replaced with serviceable items are rehabilitated and are then returned to stock as fully serviceable assets. They are then available for issue or to replace other "in store" end items for planned stock rotation.

This program yields obvious benefits in terms of operational readiness. However, it also generates "profits" in terms of:

- a. Lower "maintenance float"-materiel requirements due to the planned rotation based on criteria;
- b. More effective Repair Division performance based on the ability to schedule work in advance due to the known, planned input of criteria items;
- c. Less requirement for new procurement of end items for replacement, due to the gain in use/life expectancy under a program of planned rotation and rebuild.

Of recent vintage within the Marine Corps is the term "Replacement and Evacuation Program" -- a simple definition covering the foregoing operation of turn-around maintenance.

The financial-management of the 5th Echelon Maintenance Program is under the direction of the Comptroller. At the Albany Supply Center the Comptroller plans, coordinates, and supervises matters pertaining to the broad areas of financial-management. The Comptroller provides the Commanding General with a staff service consisting of a sound financial plan of operations and a continuous service of comparison and analysis, of actual performance as related to objectives. The Comptroller plays an important dual role in the execution of financial-management. He has at his finger tips a wealth of operational information gained through interpretation of data compiled under his direc-

tion and special attention is given to his suggestions, advice and recommendations.

Of necessity, the repair program for a given fiscal year must be or will have been, established well in advance of the annual budget preparation for that year. The product-mix of equipment appearing in the guidelines for the budget will appear as the same type of equipment that will subsequently be processed through the Repair Division. The Comptroller Division coordinates the preparation of the Command's budget. When significant trends and budget variances in the previous year's repair program are discerned through analyses and evaluation, they are brought to the attention of maintenance management for action and reconciliation in the current budget. A complete narrative description including statistical data is furnished higher authorities in justification of funds requirements. In the area of repair program, a productive workload forecast (Budget Guidelines) is furnished from higher authority to assist in planning, for subsequent fiscal year, 5th echelon maintenance program requirements and related budgeting.

Once the budget is formulated for a fiscal year's operation, a specific program of equipment to be repaired (reflecting equipment contained in the Budget Guidelines) is given by the Commandant of the Marine Corps to the Commanding General, Marine Corps Supply Center, Albany, for the purpose of developing cost estimates, establishing production schedules, and preparing bills of material for required maintenance parts for the Repair Branch. This schedule is known as the Master Work Schedule and upon approval by the Commandant of the Marine Corps, becomes the basic work-program for the Repair Division during the fiscal year. This schedule now consists largely of items encompassed by the "Replacement-Evacuation Program".

The Repair Division at the Marine Corps Supply Center, Albany, Georgia is not a miscellaneous collection of separate shops as might be supposed; rather, the Repair Division is a large completely homogeneous facility comprising all the various skills and facilities necessary for 5th echelon maintenance. For example, at Albany, the shops are located under one roof in a building of approximately 300,000 square feet in size surrounded by a concrete staging and outside work area of approximately 1,500,000 square feet. Within the confines of this building some twenty-eight productive cost-centers carry on practically all the industrial trades required to completely modify, rebuild, or repair Marine Corps equipment. However, such specialized efforts as rubber molding, foundry casting, and glass forming, are not accomplished at Albany.

The operation of a Repair Division is fundamentally under the integrated shop concept. This is to say that no one cost-center is completely autonomous in its ability to wholly accomplish all required work within its confines. Rather,

it is a chain in the link formed by all the productive cost-centers and performs only those efforts according to the trade skill(s) grouped within it.

The product-mix of equipment processed, ranging from tanks and trucks to radio sets and rifles, establishes the integrated shop concept as the most practical method of accomplishing such diversified work. Unlike the other, larger services with maintenance depots specialized by equipment types, the Marine Corps consolidates these capabilities all in one facility.

It should be readily discernible that operation under the integrated shop concept demands a realistic, accurate production control and financial-management system. With approximately 50 to 70 individual jobs in progress daily, varying in scope from rebuild of 104 tanks and 20,000 rifles to calibration of 5 radiac meters, or shipment of one distillation unit to the Fleet Marine Force on a priority basis, the need to sustain a diversified flow effort on a scheduled basis, within prescribed cost limitations, necessitates management having current cost-accounting and production status information available.

The method used by the Repair Division to control its operation is primarily a job order cost-accounting system wherein a job order is established for specific actions on a particular type of equipment, e.g., rebuild 104 M48A1 Tanks. The Comptroller executes the cost-accounting system entirely on the job order control basis. Job orders are prepared by the Repair Division and submitted to the Comptroller for validation. These job orders describe the work to be performed and reflect a planning-estimate of total costs to perform the work. If funds are available within the amount shown, the job order is validated for the work to be performed and this action authorizes the induction of a job into the repair schedule. The collection of costs under the job order system is accumulated by use of electronic equipment and is furnished by the Comptroller on a timely, periodic basis to maintenance management. This system provides essential information to management, including necessary labor and material costs, on a continuous basis. The actual cost of labor and material reports are meaningful financial reports which are used by management to analyze periodic progress of the schedule, and is the basis from which annual requirements for subsequent year operations is planned.

In providing the information needed for management control the Comptroller furnishes data through the use of such specialized financial reports as:

a. Manhour report - Daily

Lists total civilian and military hours expended by productive job order and cost-center. Such information is used, along with collateral production count information, to provide earned hour data for calculating performance of the pro-

ductive worker against Engineered Performance Standards.

b. Management report - Weekly

This report shows performance against prescribed labor and material dollar allowances by listing labor and material dollar expenditures, cumulative to date, by productive job order and cost-center. This report enables each cost-center supervisor to control his operation within specified limitations.

c. Productive and Indirect Labor Report - Weekly

This report contains all weekly labor expenditures, both productive and indirect, by job order and cost-center and cites the weekly overhead rate for each individual cost-center.

d. Completed Job Order Report - Monthly

Contains total labor, material, and overhead costs, both appropriation and statistical, expended against a completed job order; also lists quantity completed, unit cost, reference to Master Work Schedule line item, labor, materiel and other costs. This report is submitted to the Commandant of the Marine Corps to indicate progress and cost of the annual repair program.

e. Analysis of Division Operations - Monthly

Summarizes productive and overhead hours and labor dollars by cost-center; productive and overhead material dollars by cost-center; manhour and dollar value of work in progress by equipment, commodity type, and by repair work category. Also, lists overhead rates by cost-centers for all productive and overhead areas.

Management, through use and analysis of the above financial reports, is provided the necessary information with which to competently manage the repair program.

The picture, however, does not end here,

for like most other procedures in effect today, constant efforts to improve and develop new techniques must be carried on. For example, the use of Engineered Performance Standards, developed along the approach of the "one best method" and a standard time for accomplishment, is being fostered in all applicable areas of the Repair Division. As this data is made available, sound work planning, control and efficacy of operation become more a reality and easier to achieve.

The Comptroller has recently made a survey to determine the most economical and efficient manner to collect labor distribution and record personnel attendance to be used as the basis for source information pertaining to cost-accounting, work measurement, production progress, and Engineered Performance Standards Program. This proposed system envisions the utilization of time-punch-clocks to record man-hours and production count into an initial mechanized card at the work site. These cards will be used by the Data Processing Installation to record the employees attendance, to compute employees pay, to record labor distribution and match production count, and in providing work measurement data and productive effectiveness gage against the Engineered Performance Standards Program. As a by-product of this operation, the basic information will also be used to calculate the unit repair cost of each item of equipment processed through the Repair Division.

Last, and by no means least, it should be stated that the financial-management system under which the Repair Division operates is one that not only charts and controls operations within the prescribed Marine Corps financial framework, but provides the necessary flexibility to support the Force in Readiness concept of the Corps by permitting accomplishment of short notice priority maintenance work for the Fleet Marine Force concurrently with the longer range repair/rebuild programs -- both in a controlled, efficient manner.

AUDITING IN THE DEPARTMENT OF THE NAVY

Rear Admiral L. C. Peppell (Retired)
Former Assistant Comptroller, Audit

THE NAVY AUDIT ORGANIZATION

Responsibility for auditing in the Department of the Navy has been placed, by the Secretary of the Navy, in the Comptroller of the Navy. The Assistant Comptroller, Audit, acting in behalf of the Comptroller, is responsible for the development of audit principles, policies, and procedures, and for the over-all direction and administration of all audit activities of the Navy.

Navy audits are of two principal types: internal audits -- audits of all activities within the Department of the Navy; and contract audits -- audits of the books and accounts of private firms which are actual or prospective contractors or subcontractors of the Navy. Internal audits are designed to ensure the existence of effective controls and accountability for all funds, property, and other assets for which the Navy is responsible. Contract audits are performed to furnish accounting advice and cost analysis service to contracting officers on cost representations of contractors in connection with the pricing, repricing, administration, and settlement of contracts with industry, and to determine and certify costs claimed by contractors under cost-type contracts.

The Assistant Comptroller, Audit, is the head of the Navy audit organization. This organization consists of a headquarters office in Washington, D. C., responsible for policy and over-all management, and eleven Navy area audit offices responsible for the operational functions of auditing and cost analysis. Each Navy area audit office is assigned a specific geographical area of responsibility. As circumstances warrant, branch audit offices are established under Navy area audit offices at certain geographical locations where there are substantial concentrations of industrial contractors or Navy activities. Continuous audits are established, both at the plants of industrial firms which hold large contracts and at large Navy activities, whenever the audit workload is sufficient to justify the assignment of an audit staff on a continuing basis. Audits which have not been established on a continuous basis, or which have not been assigned to the cognizance of a branch audit office, are performed by audit teams operating directly under the supervision of the Navy area audit offices.

The accompanying functional organization charts for the Office of the Assistant Comptroller, Audit and the Navy area audit offices depict the assignment of these responsibilities.

THE PHILOSOPHY OF CONTRACT AUDITING

The auditing of Navy contracts has been undergoing an evolutionary process since the

beginning of World War II. It will be realized that such evolution was inevitable when one considers the audit concepts applied immediately prior to and during the early days of World War II. These concepts were predicated on the assumption that all costs reimbursed by the Government had to be audited in detail, penny by penny, and document by document. While going on more or less continuously, the evolutionary process was marked by several significant strides designed to bring about the adoption of more modern audit techniques as recognized and practiced by the public accounting profession.

The first major stride in the evolutionary process was the adoption of the "test-check" audit technique in place of a detailed audit of transactions. The audit philosophy represented by this change was incorporated in the Navy's "Revised Cost Inspection Manual" issued in 1942 for use in connection with the audit of contracts with industry. This manual stressed the auditing of charges to Navy contracts by a series of carefully planned tests and selective checks, varying in degree according to the acceptability of the contractor's system of accounting and internal controls. Under both the detailed audit and the "test-check" audit approaches, the audit or verification started with the items of cost included in a voucher, or charged to a contract, and worked backward to the sources of original entry.

As the tempo of the war production effort increased, the audit workload burgeoned by virtue of the greater number and larger dollar value of cost-type contracts and the increasing utilization by procurement officials of the fixed-price redeterminable form of contract in connection with which Navy auditors were called upon to submit advisory accounting reports for negotiation purposes. To cope with the increasing workload, another major step in the evolutionary process was taken. This is referred to as the "across-the-board" audit approach. While this approach retained the basic principle of tests and selective checks initiated by its predecessor, it moved away from the audit of transactions charged to vouchers or specific contracts and, in lieu thereof, concentrated audit effort on the verification of cost by elements, e.g., material and labor, starting with books of original entry such as purchase journals, voucher registers, payrolls, etc., and again working backward to the source of original entry. By so doing, it was possible to establish, to a reasonable degree, the accuracy of the contractor's records not only with respect to a particular Government contract but also with respect to all Government contracts and commercial work at one and the same time and with comparatively little additional effort.

CONTROLLER OF THE NAVY

ASSISTANT COMPTROLLER, AUDIT

FUNCTIONAL CHART

ASSISTANT COMPTROLLER, AUDIT

Responsible, throughout the Department of the Navy, for developing audit principles and policies; prescribing audit programs and procedures; directing, executing, reporting and evaluating both control and internal audit; and for the coordination of all audit activities; and exercising management control over all field offices necessary to the efficient and effective performance of the audit function.

CONTROL AND AUDIT DIVISION

Responsible for (a) the formulation of internal policies, (b) the implementation of policies of higher authority, (c) the necessary planning, research, instruction and liaison, and (d) the evaluation of the effectiveness of the performance of necessary auditing (and related procurement) activities and analysis of results, including review and examination (usually on a selective basis) of systems, controls, accounts, and supporting evidence, of the accuracy and propriety of a contractor's representations and of the propriety of the contractor's expenditures, and of the reporting of findings or of the approval of claims for reimbursement.

INTERNAL AUDIT DIVISION

Responsible for (a) the formulation of internal policies, (b) the implementation of policies of higher authority, (c) the necessary planning, research, instruction and liaison, and (d) the evaluation of the effectiveness of the performance of audits of activities of the Department of the Navy, including review, appraisal, evaluation and examination of the financial and accounting policies, systems, procedures, and performance thereunder, reporting all resources and expenditures (financial and non-financial) and reporting findings and recommendations to management for corrective action.

AUDIT MANAGEMENT DIVISION

Responsible for the formulation, direction, execution, and evaluation of internal audit programs and procedures, applicable to the Navy audit organization, including, but not limited to office services, correspondence, files, space, office layout, security, utilization of personnel, budget and financial administration, and the coordination of statistics, reports and forms control, work simplification, work measurement, location of field offices, organization plans and changes, consideration of innovations and changes in the area of audit management and liaison in the area of audit management services.

AUDIT STAFFING DIVISION

Responsible for (a) the formulation of internal policies, (b) the implementation of policies of higher authority, (c) the necessary planning, research, instruction, execution, and liaison, and (d) the evaluation of the effectiveness of the performance of all activities of the Navy audit organization, including, but not necessarily limited to recruitment, career incentives, career development, technical training, and reports, and personnel actions respecting hiring, promotion, transfer, discipline, leave, and severance.

AUDIT FINANCIAL BRANCH

Responsible for the formulation, execution and evaluation of policies, plans and procedures, including necessary liaison, respecting the budgetary, fiscal operations, and financial reporting and management applicable to the Navy audit organization.

AUDIT SERVICE BRANCH

Responsible for (a) the office services program of the Navy audit organization, including travel and transportation, correspondence, files, records management, printing and publications, office location, and the management of the office layout, etc., (b) the security program, (c) routine administrative reports required, including consolidation, and (d) the reports and forms control program.

PLANNING AND OPERATIONAL ANALYSIS BRANCH

Responsible for the formulation, execution and evaluation of policies, plans and procedures, including necessary liaison, respecting organization, management, and operational planning, work measurement, operational reports and statistics, and special projects not within the scope of responsibility of other elements of the audit organization.

Date:
8 August 1955

Approved: *W. B. Brando*
V. B. Brando

Title of Present Office:
Office of the Comptroller of the Navy

Title of Office:
Office of Assistant Comptroller, Audit

Chart No. 1302

-20-

The "comprehensive audit approach" is the latest refinement in the process of evolution. The idea behind it is not new. Its basic element -- relating the extent of verification to the acceptability of the contractor's accounting practices and system of internal control -- is incorporated in the Revised Cost Inspection Manual, previously mentioned, and is equally present in the "across-the-board" audit approach. The difference between the comprehensive audit and the "across-the-board" audit is primarily one of emphasis. To understand this difference, it is necessary to comprehend what is intended to be accomplished through audit effort.

The primary function or mission of the Navy contract auditor is to satisfy himself as to whether or not contractors' representations, regarding their costs of performing Government contracts, reflect the contractors' actual experience stated in accordance with acceptable accounting principles, and in conformity with the contract provisions and applicable rules of the Government. Or, in short, the mission is to determine "How acceptable are the cost representations of the contractor?"

That portion of a contractor's cost representations which reflects actual experience generally is taken from the contractor's books of account which are the end product of its accounting system. On the principle that the whole equals the sum of the parts, it follows that data taken from the books of account can be relied upon if the information recorded in original basic documents has been established to be accurate and the system of accumulating costs therefrom in the books of account is acceptable and is being followed. Predicated on this principle, the "comprehensive audit approach" places the major emphasis on establishing the soundness of the contractor's accounting procedures and practices and the effectiveness of its system of internal control. For example, in the case of labor, the audit emphasis under the "comprehensive audit approach" is directed towards verification that the system for recording labor charges properly lodges accurate costs against the contract or work order on which the labor was expended, whether it be Government or commercial. As brought out before, verification is accomplished by careful review of the contractor's labor accounting procedures and by appropriate test checks of the application of these procedures in actual practice. These test checks need not be restricted to Government work, so long as the scope of such tests is broad enough to establish that the labor charges are being stated correctly against all work.

As already stated, the "comprehensive audit approach" starts at the point of origin and works forward. This is accomplished by adopting an audit program designed to provide continuous review of the accounting procedures and practices and the system of internal control to assure their acceptability, and by making

such observations and test checks as may be appropriate to establish that the procedures are being carried out in practice. To proceed in this manner, the initial requirement is a sufficient understanding of the contractor's accounting policies, procedures and practices, and system of internal control. With this understanding, a determination as to whether the "comprehensive audit approach" is feasible in the particular circumstances may be made and an intelligent plan for the audit may be formulated. Feasibility is determined by such factors as the adequacy of the contractor's accounting system and internal controls, the amount of Government contract costs subject to audit, whether the contracts are expected to be for a short period of time or over an extended period, the proportion of Government business to total business, etc. Upon determination that the "comprehensive audit approach" appears feasible, a complete system survey is undertaken.

The American Institute of Accountants in Chapter 16 of its "CPA Handbook" outlines a number of approaches to the system survey which can be used individually or in combination as particular circumstances may require. Among these is the "Questionnaire Approach" which has been incorporated in Chapter III of the Contract Audit Manual. This Manual was issued under Congressional legislation which placed responsibility with the Comptroller of the Department of Defense for the establishment and supervision of the execution of principles, policies, and procedures of audit of procurement contracts. The Manual prescribes auditing policies and procedures for use by the audit agencies of the military departments in the performance of audits of procurement contract costs and other related audit assignments. The questionnaire, or "Guide" as it is referred to in the Contract Audit Manual, is intended to cover the survey of operations of an average contractor with emphasis placed upon the accounting practices and internal controls that are directly related to contract performance and costs. The "Guide" is not intended to be applicable in its entirety to every contractor whose records may be subject to audit nor is it intended to restrict the scope of the survey. The survey is tailored to each specific case by curtailment or expansion as the circumstances warrant. To the extent to which it will be utilized, the "Guide" provides an excellent starting point for the "comprehensive audit approach."

The auditor prepares working papers in sufficient detail to record clearly the extent of the review of the contractor's internal controls, accounting practices, and operating procedures. "Yes" and "No" answers to questions in the Guide are unacceptable in themselves; the auditor, therefore, must use working papers to indicate: (1) the source of information; (2) the contractor's prescribed procedures; (3) the contractor's actual practices; and (4) the auditor's conclusions as to adequacy of the procedures and practices.

Upon completion of the system survey, the auditor is in a position to institute the "comprehensive audit approach," if appropriate. Under this approach, the auditor's work is divisible into two principal categories, that is: (1) The Audit Program; and (2) The Audit Working Papers. The Audit Program is developed on the basis of the system survey to provide for a continuous review of sufficient intensity to ensure timely (at least annual) coverage of all phases of the contractor's accounting system, procedures and practices, and system of internal control. It prescribes the extent of test checking of transactions deemed appropriate to establish that the system and procedures are being carried out in practice and that data and distributions indicated on original sources of entries are accurate and so transcribed. The Audit Working Papers under the "comprehensive audit approach" include a complete description of the internal controls and accounting practices of the contractor, in support of the system survey discussed herein. It must be remembered that these papers are in addition to those working papers which normally are prepared: (1) to be a permanent record of audit work done; (2) to provide the basic information from which an audit report is prepared; (3) to provide a basis for the review by supervisory personnel of audit work done; and (4) to be utilized by audit personnel when participating as advisors in subsequent contract negotiations. Under the various previous approaches to contract auditing, a system survey was viewed as a separate divisible task, sometimes neglected or even overlooked in its entirety. Now, under the "comprehensive audit approach," with the conventional audit working papers furnishing the necessary evidence that the system has been tested to establish that it is operating as intended and that it produces acceptable results, the system survey represents the very foundation on which the audit program is based. The survey and conventional working papers are integrated in such a manner as to make them a comprehensive whole. This integration is accomplished in two ways: (1) by providing, as a supporting schedule to each particular phase of the system reviewed, a record of the specific transactions test checked to establish that that particular phase is being carried out in practice as described in the survey; and (2) by preparing schedules of tested transactions, the scope of which serves as verification for a number of phases of the system.

To be effective, certain principles should be applied to test checking. The items to be tested constitute a sampling of all of the items of cost incurred by the contractor. Sampling is accomplished in one of two manners, selective sampling or random sampling. Since random sampling is dependent on the homogeneity of the total group of items, which rarely obtains with respect to accounting transactions, selective sampling should be used. The scope of the sample selected should include not only work

performed on Government contracts but also other work of the contractor as well. In other words, it should represent a cross-section of the contractor's entire operations. Also, it should emphasize significant items. However, here the auditor must be constantly alert to situations where items, although unimportant individually, may be considered significant cumulatively.

The "comprehensive audit approach," as the term is intended to convey and as outlined in the foregoing, embraces a thorough-going analysis of a contractor's complete operation. Therefore, the volume of auditable work must be substantial to justify the time and effort that will be expended. Such substantial volume, while present with many contractors with whom a major portion of military appropriations are spent, is not present for a very large number of companies doing business with the Government. In these latter cases, it would be economically wasteful to utilize the "comprehensive audit approach" as the cost would exceed any possible savings. Where the volume of auditable work is small, the audit is directed to the verification of the cost data contained in a particular claim which the contractor asserts or to a particular pricing proposal for contract negotiation purposes. Where the volume is large, but not so large as to justify adoption of the "comprehensive audit approach," the "across-the-board" approach described earlier, preceded by a limited system survey, permits more expeditious and economical performance and still provides the necessary protection of the Government's interest.

Whichever audit approach is utilized, the audit is conducted on the basis of test checks, the extent and scope of which are directly dependent on the acceptability, determined by survey, of the contractor's accounting procedures and practices and his system of internal control.

THE PHILOSOPHY OF INTERNAL AUDITING

The purpose of internal auditing is stated in Department of Defense Directive 7600.2 of 7 August 1957, as follows:

"The purpose of internal auditing is to provide those responsible for management at all levels with an independent, objective, and constructive evaluation of the effectiveness and efficiency with which financial responsibilities are being carried out. All organizational components and levels of operations will be subject to independent and comprehensive audit review and appraisal. Internal audit activities will include examining and appraising policies, systems, procedures, records and reports relating to budgeting, accounting, financial or business transactions of all kinds, and matters of a related nature. This includes examination and evaluation, from a financial management standpoint, of procurement, supply and property management policies, procedures, and trans-

actions. Audit activities will be directed toward determining that management controls at all levels are adequate in concept and effective in application. The auditors will report facts ascertained and make recommendations in connection therewith to appropriate levels of management within their respective military departments."

Internal audits of Naval activities are conducted on the basis of functional areas. That is to say, all phases of the operations of an activity which are directly related to the same basic function are audited as an entity throughout the various organizational units in which such phases appear. Comprehensive internal audits include the following functional areas, or such of the following areas as are present and pertinent to a given activity: Budgeting, Procurement, Appropriation and Fund Accounting, Plant Property Accounting, Government Property in Possession of Contractors, Supply Management, Stores Accounting, Inventory Management, Cost Accounting, Timekeeping and Civilian Payrolls, Disbursing, Navy Industrial Fund Accounting, Non-appropriated Fund Activities, Navy Rental Housing Facilities, and other funds or accounts.

Internal audits comprise the following types: continuous internal audit assignments, comprehensive periodic internal audits, disbursing audits, housing audits, property audits (i.e., Government property in possession of contractors), and special audits.

Continuous internal audits are comprehensive audits of all functional areas applicable to a given activity, performed by an audit staff assigned to the activity on a continuous basis. All bureaus and certain offices of the Navy Department and Headquarters Marine Corps, and the Headquarters Military Sea Transportation Service, are audited on a continuous basis. In addition, continuous internal audits have been established at fourteen of the larger activities of the Navy and Marine Corps, including shipyards, major air stations, the Naval Gun Factory and the Marine Corps Base, Camp Lejeune. It is planned to establish continuous internal audits at other activities which are sufficiently large to justify such coverage to the extent that funds and personnel ceilings are made available for the purpose.

Reports of continuous internal audits are of two types: interim reports, and annual reports. Interim reports are ordinarily prepared whenever the audit in a given functional area has been completed, are published informally, and are given a limited distribution. Copies of such reports are transmitted only to the activity audited and to the management bureau. The letter of transmittal requests that appropriate action be taken to implement the recommendations presented, and requests a reply from the activity or management bureau only in those instances in which there are objections to the recommendations.

An audit year is individually established for each continuous internal audit assignment, and

the audit years are staggered so as to distribute the workload for the Navy area audit offices and for the headquarters office. At the end of the audit year for each continuous audit, an annual report is prepared. The annual report is, substantially, a restatement of the findings previously included and presented in the interim reports for such audit. However, the findings in the annual report include information and comments regarding any action taken by the activity to implement the recommendations previously presented in the interim reports. In those instances where sound objections have been offered to recommendations previously made, such items are revised or deleted in the preparation of the annual report. If no action has been taken by the activity to implement a recommendation which is still deemed to be sound, or if the action taken is considered to be inadequate or unsatisfactory, the recommendations are reiterated in the annual report. Annual reports of continuous internal audits are formally published by the Comptroller of the Navy, and receive a rather wide distribution. In addition to the activity audited and the management bureau, copies of such reports are sent to other bureaus which have a secondary or related interest, the Inspector General of the Navy, the Office of Naval Material, Office of the Secretary of Defense, and others. Annual reports of continuous internal audits are transmitted to the action addressee (i.e., the management bureau) with a letter from the Comptroller of the Navy requesting written advice regarding action taken to implement the recommendations presented.

Activities at which continuous internal audits have not been established are audited on a periodic basis. The frequency of periodic audits at any given activity is governed by the size and importance of its operations, and by the availability of audit personnel. The following classifications and criteria are used in establishing the frequency of periodic audits at various Navy activities:

CATEGORY A - All Navy activities having an annual maintenance and operating cost of approximately \$10,000,000 or more, and all Navy regional accounts offices, Navy purchasing offices, and inventory control points. Activities in this category are audited at least once every two years.

CATEGORY B - All other Navy activities having an annual maintenance and operating cost of approximately \$2,000,000 to \$10,000,000, and all Navy accounts disbursing offices. Activities in this category are audited at least once every two years, provided the frequency criteria for CATEGORY A activities either has been or will be met.

CATEGORY C - All other Navy activities having an annual maintenance and operating cost of approximately \$500,000 to \$2,000,000,

and all commissary stores and district publications and printing offices. Activities in this category are audited at least once every three years, provided the frequency criteria for CATEGORY B activities either has been or will be met.

CATEGORY D - All remaining Navy activities. Activities in this category are audited subsequent to the fulfillment of the frequency criteria for CATEGORY C activities at such times and with such frequency as conditions permit, but ordinarily not more often than once every three years.

Disbursing offices, rental housing projects, and property administrators constitute exceptions to the general plan governing the frequency of periodic audits. Disbursing offices and rental housing projects are audited not less frequently than once each year, and property administrators (i.e., those controlling Government property in possession of contractors) are audited not less frequently than once every two years. In the case of an activity under continuous audit, or scheduled for a regular comprehensive periodic audit during the required period of frequency, such disbursing audits, housing audits, and property audits are scheduled and accomplished as a part of the regular continuous or comprehensive periodic audit of the activity. In those years when an activity not under continuous audit is not scheduled for a regular periodic audit, disbursing audits, housing audits, and property audits are scheduled and accomplished as separate audits to meet the required periods of frequency.

During the course of all internal audits, at the completion of the audit in any functional area, the audit findings are freely discussed with the supervisory personnel directly concerned. This is done to apprise them of the findings, to ensure that there is no disagreement between such personnel and the auditors regarding the facts pertaining to a given matter, and to secure their comments, opinions, or objections regarding proposed recommendations.

Written drafts of the findings are prepared at the conclusion of the audit in each functional area by the auditor responsible for the work in such area. These drafts are reviewed by the auditor in charge of the audit, and revised as he deems necessary. On a continuous audit the draft of the findings for a completed functional area is prepared in the form of an interim report, which is thereafter handled and processed as described above. On a comprehensive periodic audit, when the audit of all functional areas has been completed the report drafts for the various areas are consolidated by the auditor in charge and become the initial draft of the audit report.

When the audit work nears the stage of completion, the Navy area audit office internal audit division director or assistant director visits the site of the audit. During such visit,

he reviews and discusses the audit work with the auditor in charge, reviews the working papers to the extent necessary to assure himself that the audit findings are adequately supported, and reviews the initial draft of the audit report to ensure that the findings are clearly presented and that the recommendations are sound and well supported.

When the Navy area audit office representative is satisfied with the report, a copy of the initial draft is submitted to the commanding officer of the activity. He is invited to read the report and discuss the findings and recommendations with the Navy area audit office representative and the auditor in charge. During such discussion, notes are prepared summarizing the comments and opinions of the commanding officer and any specific objections he may have to proposed recommendations. The comments and objections of the commanding officer are considered, and the draft of the report is revised to meet such objections to the extent deemed appropriate.

Upon completion of the necessary changes, the initial draft of the report is submitted by the auditor in charge to the Navy area audit office. There, the report is again reviewed and modified as necessary, and a smooth draft is prepared and transmitted to the headquarters office of the Assistant Comptroller, Audit. Here, the report is finally reviewed to ensure that the findings are clearly presented, that the conclusions are sound and adequately supported by the findings, and that the recommendations presented are consistent with official policies of the Navy Department. Matters which involve questions of accounting policy or procedures are discussed and cleared with personnel in that segment of the Comptroller's organization which has official responsibility for such matters. If the findings indicate a need for clarification or revision of official instructions governing accounting procedures, the matter is referred to the appropriate section of the Comptroller's office for action. If the findings involve matters which give rise to legal questions, such questions are referred to or discussed with counsel prior to release of the report. The notes which were made at the completion of the audit, setting forth the comments, opinions, and objections of the commanding officer and department heads of the activity, are read and considered, and determinations are made regarding the official position which should be taken by the Navy Comptroller with respect to the matters in question.

When the review in the office of the Assistant Comptroller, Audit has been completed, a "preliminary draft" of the report is transmitted to the audited activity and the management bureau. The letter of transmittal requests that the "preliminary draft" be reviewed, and that comments thereon be submitted to the Navy Comptroller by a specified date in order that such comments may be received and considered prior to the final, or formal, publication of the

report. In those instances where the comments received offer sound reasons, the reports are revised or modified as deemed appropriate prior to printing and final publication. As in the case of annual reports of continuous internal audits, the final or formal reports of comprehensive periodic internal audits receive a rather wide distribution. In addition to the activity audited and the management bureau, copies of such reports are transmitted to other bureaus which have a secondary interest, the Inspector General of the Navy, the Office of Naval Material, Office of the Secretary of Defense, and others. The letter of transmittal requests the action addressee (i.e., the management bureau) to advise the Comptroller of Navy, by letter, of the action taken to implement the recommendations presented. All such written advices are reviewed upon receipt in order that the Navy Comptroller may be assured regarding the adequacy and propriety of the action taken by the audited activity.

The policies and procedures followed in the conduct of internal audits in the Navy represent an earnest endeavor on the part of the Navy audit organization to accomplish its audit mission in an effective and creditable manner. Navy internal audits constitute an extensive analysis and careful appraisal of all phases of financial operations and related matters. The audit organization functions independently of management bureaus or commands, yet it serves these levels of organization. The opinions and comments of those officials responsible for the operations being audited are obtained and considered, yet such opinions do not prevail against the well-founded conclusions of the internal auditors. Lastly, although every effort is made to secure the voluntary cooperation of activity officials in initiating corrective action and the implementation of recommendations, care and vigilance are exercised by the audit organization to ensure that sound recommendations are neither ignored nor neglected.

AUDIT MANAGEMENT

The Audit Management Division is composed of three branches: Audit Financial Branch, Audit Services Branch, and Planning and Operational Analysis Branch, and is responsible for the formulation, direction, execution, and evaluation of audit management policies, plans, and programs applicable to the Navy audit organization. The areas of responsibility include audit management reports and statistics, budget and fiscal activities, work measurement, work simplification, office services, correspondence, files, space, office layout, security, mobilization planning, location of field offices, organization plans and changes, reports and forms control, coordination of instruction and manuals for field offices, and necessary liaison in the area of audit management services.

The Audit Financial Branch is responsible for budgetary and fiscal operations, financial

reporting programs, and civilian manpower ceiling controls applicable to the Navy audit organization. This branch prepares and submits annually the budget estimates for the Navy area audit offices, interprets the actions taken as a result of higher reviews, and prepares the revised estimates accordingly. It prepares the narrative backup data for use by the program witnesses before the Congressional subcommittee hearings. It also submits annually the request for apportionment of approved funds for the Navy area audit offices, recommends the allotments to be approved within the total funds available, and distributes approved personnel ceilings to the Navy area audit offices. Financial reports and ceiling utilization control reports received from the field offices are reviewed and evaluated, and management is provided with the mechanics of control which are vital to the operation of the Navy audit organization.

The Audit Services Branch is responsible for: (a) the office services programs of the Navy audit organization, including travel and transportation, correspondence, files, records management, printing and publications, reproduction, supplies, blank forms, office layout, initiation of administrative directives, etc.; (b) the security program; (c) routing administrative reports; and (d) administration of reports and forms control programs in the Navy audit organization.

The Planning and Operational Analysis Branch is responsible for organization and mobilization planning, work simplification, work measurement, operational reports and statistics, and special projects not within the scope of responsibility of other elements of the audit organization. Basically, this branch is responsible for performing a continuous review, analysis, and appraisal of the organizational structure and operating methods and procedures of the headquarters and field offices of the Navy audit organization, the objectives of which are to improve methods and procedures and to achieve and maintain optimum effectiveness, efficiency, and economy in operations. These objectives are accomplished by reviewing operational reports and by visiting the Navy area audit offices and their components periodically to improve management by reviewing and evaluating performance, providing assistance with problems, and promoting communications and understanding between headquarters and field audit offices. The branch is also responsible for developing work measurement reporting procedures and for controlling the receipt, recording, and reporting of statistical information required by management for the operation of the audit organization.

PERSONNEL MANAGEMENT

The Audit Staffing Division of the headquarters office is responsible for developing programs for recruitment, classification, train-

ing, and career development of the audit staff and non-technical personnel. The responsibility for administering these programs is lodged with the staffing services division in the Navy area audit offices.

The Navy audit organization's primary asset is its people. There's nothing so important to any organization as its people. It thus becomes important to have one part of the audit organization whose principal objective is PEOPLE--how to get good people; create a good working climate with challenging opportunities to offer them after they join the organization; further develop their abilities; effectively utilize their abilities and training; and make long-term career prospects so attractive that they want to stay. As a matter of practical day-to-day operations the line management supervisors are in the key positions to best achieve the objectives of attracting, motivating, developing and retaining an effective staff. The job of the Audit Staffing Division, and its counterpart in Navy area audit offices, is to coordinate the efforts of line management and furnish advice and assistance as required. They should attempt to overcome the "finger in the dike" approach which often results when the total responsibility is left to the line supervisor who is faced with a multitude of technical problems requiring immediate solution.

The Navy audit organization employs approximately 1,130 people. Of this total, approximately 80 are officers of the U. S. Navy Supply Corps and the U. S. Marine Corps, 850 are Civil Service professional auditors (many of whom are CPAs), and 200 are Civil Service management, staffing, and clerical personnel. The technical and executive civilian auditor positions offer a career pattern from the auditor-trainee level through successive steps to the GS-11 journeyman level and the eventual goal of grade GS-15.

During the past two years, the Assistant Comptroller, Audit has developed and classified a series of basic position descriptions for all auditors in the field organization. With 20 basic

descriptions, it was possible to replace approximately 800 individual position descriptions thereby saving thousands of man hours of individual effort and achieving uniformity in correlating the position with other management and staffing functions such as budget, qualification requirements, performance standards, career patterns, organizational analysis, manpower utilization, etc.

It has been well recognized by the Navy audit organization that the training of professional auditors does not end when they complete their formal education. The education they receive in colleges and business schools is only a base upon which to build. For that reason, a training program has been developed which is designed to improve not only their technical and administrative knowledge and abilities, but also their understanding of the Navy in its operations and their relationship thereto as auditors.

The merit promotion program is used for all promotions. Individual opportunities for promotion are offered on a competitive basis in consideration of merit, fitness, and potential ability. All grades GS-14 and GS-15 vacancies in the headquarters office and in field offices are circularized throughout the organization and applications are requested from qualified Navy audit employees. Each Navy area audit office has developed its own promotion plans for insuring a systematic procedure of selection for promotion according to merit from among its own employees to grade GS-13 and below vacancies. These may also be circularized throughout the organization when it is considered desirable to broaden areas of competition.

The organization and techniques utilized in discharging the Navy's audit mission, as described above, are under constant scrutiny with a view to improving their economy and effectiveness. The resultant demands provide a challenge for management and professional personnel possessing the highest talents and skills. The reward is in seeing an important mission successfully accomplished.

KNOW YOUR OFFICERS

Major Joseph C. Armour, USA
Founding Member and First President of SMAS (1949-50-51)

Graduated from Washington and Lee University and studied Accounting and Finance at Wharton School, University of Pennsylvania, and put in nine years corporation accounting prior to entering the Army in 1942.

Served with the 36th Infantry Division, participating in the invasion of Salerno.

Transferred in January 1944, to Headquarters Mediterranean Allied Air Forces as Chief of Medical Reports and Statistics Section. February 1955 was transferred to same job with Headquarters 15th Army Group. Chief of Medical Supply for U.S. Forces Austria from August 1945 to December 1946.

Comptroller, Brooke Army Medical Center from January 1947 to February 1953.

Served in Headquarters, U.S. Army Europe from February 1953 to March 1956, first as Budget Officer for the Medical Service and then as Chief, Operating Agency Section.

Comptroller, Ft. Benjamin Harrison March 1956 to January 1957. Served with U.S. Army Finance Center until September 1958 in Budget Office and as Assistant Executive Officer.

Current assignment, Deputy Comptroller, Fort Leavenworth.

HUMAN RELATIONS APPLIED TO AIR FORCE COMPTROLLERSHIP

Brigadier General Paul W. Scheidecker
Comptroller, Air Defense Command
United States Air Force

Section Two of Brigadier General Scheidecker's article appeared in the September Issue of the Armed Forces Comptroller

Chapter IV

LEADING HIS ORGANIZATION

In Chapters II and III, the major role was shared by two people--the Comptroller and the Commander. Certain human factors concerning these two individuals were discussed, looking first at the Comptroller himself, then seeing him associated with the Commander.

This chapter will portray the Comptroller as the leader of the Comptroller staff agency. In so doing, it will depict the Comptroller helping his people do things for a common purpose.

At the outset of the preceding chapter, it was stated that the Commander's primary function is "to get a job done through the efforts of other individuals." Himself a leader, the Comptroller has an identical primary function. In fact, this same function persists at all levels of the command, wherever men have other men working for them.

NEEDS OF THE COMPTROLLER AND HIS EMPLOYEES

In a very broad sense, it can be said that the Comptroller tries to integrate accomplishment of his technical mission with needs of his employees. As such, as was depicted in the introduction, the Comptroller strives to react well to constantly active forces, both external and internal.

Bearing in mind the Comptroller's position in an environment of dynamic equilibrium, let us seek answers to a brace of fundamental questions. First, what needs are brought to work by his employees? Second, what does the Comptroller expect of his employees?

The answer to the first question is complex. It varies by individual according to education and experience. To some, the financial incentive is most important. Others desire professional advancement. Still others want security, including a provision for retirement.

But most of them desire some kind of social recognition. They seek a place in the sun, a feeling that they are recognized as active players on a successful team. They want their superiors to recognize their good work. They want to be able to honestly treasure the feeling that their absence from work is more than just a statistical fact entered on the morning report. To summarize, we might look on this as a matter of pride.

In addition, another social need deserves

mention. It is the spirit of comradeship. We might describe it as the feeling: (1) that the individual is part of a group organized for an intelligent, collective, useful purpose; (2) that the group is united by close cooperation. A good example can be visualized by recalling members of a bomber crew during World War II. Their common purpose was to help destroy the enemy's air force, to help defeat Germany. As to intimate cooperation, none can be higher than that required to survive in the face of determined enemy fire. The spirit of comradeship in this bomber crew was further enhanced by the elements of exclusiveness and risk.

Now, let us examine the second question. What does the Comptroller expect of his employees? Briefly, he counts on them to help him accomplish his mission. This means that he expects them to: (1) perform their technical jobs well and (2) harmoniously get along among themselves and their associates outside the Comptroller staff agency.

FORMAL AND INFORMAL SIDES

Before we actually consider the Comptroller and his people at work, one other matter should be discussed. We must understand that the Comptroller organization, like every other military organization, and all civilian groups, has two sides. These can be described briefly as its formal and informal sides.

If we view all the people on the Comptroller team, as shown on the organization chart, we notice that the entire organization has been divided into blocks of groups, sub-groups, sub-sub-groups, etc. Titles of some of these blocks are divisions, branches, sections and units. Each group has a functional purpose designed to help achieve the over-all technical mission of the Comptroller. This is a "paper" structure. It defines relationships precisely -- responsibility, authority, communication and supervisory control. On some charts, building, room, and telephone numbers are shown. The entries on these charts can be changed at will by persons in authority. These charts depict the formal terms prescribed by these charts.

However, as stated above, the organization also has an informal side. This side is different from its formal counterpart because of its indefinite, complex patterns of relationships. These have been worked out by the people themselves. Each employee has his own likes and dislikes, by individuals and by groups. He thinks, talks, and acts in accordance with the

behavior of his group. For example, certain people go to lunch with each other every day. Some share transportation in car pools. Others are attracted and cemented to each other athletically, for bowling, softball, basketball, etc. Members of informal groups strive to help their friends in their daily technical tasks. When the opportunity is there, they try to help each other advance formally, by putting a good word into the right ear of authority. Also of significance, enmities are developed. This is the human side of the Comptroller world.

The path we have trod thus far in this chapter has been essential as a frame of reference for what follows. From now on, including Chapter V, let's keep in mind what we have discussed about the Comptroller's dual mission, i.e., what his employees expect from work and what the Comptroller desires of them, all woven into a backcloth that is both formal and informal. We pass now to a discussion of the over-all behavior and attitude that constitute Comptroller leadership.

SETTING MEANINGFUL GOALS

Of paramount importance is the necessity for the Comptroller to spell out meaningful goals for his employees. It is the primary step to be taken by him in attempting to satisfy the needs that his employees bring to work with them. Obviously, employees cannot develop feelings of belonging, recognition, and self-essentiality unless they know what they have to do to achieve rewards and self-satisfactions. Further, they cannot be successfully integrated for comradeship unless they have a common goal, or set of goals, around which to organize. When the employees have meaningful work objectives to spur them on, we can say that their efforts are purposeful.

At first blush, it might be said that the routine work which appears on the scene every day might satisfy the requirement to set meaningful goals. The following examples are commonplace. Supervising preparation of a financial plan draws the budget people into a tightly knit group for one main purpose -- submitting a sound financial plan to higher headquarters to meet a deadline that is usually tight. The accountants rally themselves as a group to publish a monthly status of funds report. And the people who man the electrical accounting machines drive hard to submit their periodic reports to higher headquarters on time.

Goals such as those mentioned above are effective to a considerable extent. They serve to weld the people concerned into groups for cooperative effort aimed at specific objectives. But their value is limited by not getting all Comptroller employees to strive for the same objective. Only pockets of employees have these meaningful goals. As a result, anyone who does not help attain one of these objectives is left out. His efforts are not solidly meaningful to him, in the sense described above.

Now, because of the wide diversity of specialized functions performed in the Comptroller organization, it is difficult to specify objectives which taken individually will have meaning to all employees, at all organizational echelons.

As an illustration, let us look at a New England textile plant faced by a real problem of survival. This plant has been operating successfully for over a hundred years in one town. Sons, fathers, and grandfathers have worked in the plant. There is no other comparable work in town nor is there any other type of industry of significant size. Suddenly, the plant's profitable survival is seriously threatened by Southern competitors who are able to manufacture textile products at lower cost (cheaper labor and less transportation expense). In this situation, an imaginative top management can make a real effort to remain competitive by offering a meaningful goal of the highest order to its employees whose sole source of bread and butter is in danger. Top management need only say something like, "All our jobs are in peril. We've got to pull together to reduce operating costs and improve quality." Such a situation and its proposed solution are packed with meaning for all hands.

As a military example, squadron competitions at parades and inspections can be cited. In this case, all the officers and airmen in each squadron are welded together for a common purpose -- winning first prize.

But the Comptroller's business is an apple off another tree. His organization probably will not have to face the stiff challenge of economic survival. He doesn't turn out a single type of product. Civilians don't participate in parades. What can he do to inspire the entire organization?

As a matter of common practice, the Comptroller and his supervisors should emphasize how Comptroller services contribute toward improving mission accomplishment in the command. They should stress that the harmonious, collective efforts of all individuals, as well as all groups of individuals, are needed to help produce more operational readiness for each taxpayer-dollar. After a period of time, the people in the Comptroller organization will accept this philosophy as meaningful.

There is another way in which the Comptroller himself can contribute in this area. It is by attitude. He can show by words and performance that he is intensely interested in making the Comptroller organization a really topnotch shop. He can do this by being solicitous of, and warmly receptive to, suggestions as to how methods can be improved so as to provide better service to customers -- then doing something about it. With such an attitude, it doesn't take long for employees to feel that they are all part of a progressive organization. As greater respect and confidence grow in the minds of the customers, organization pride will blossom in the employees.

EMPLOYEE PARTICIPATION

Another effective way to integrate employees into a cooperative work-team is to allow them to participate in making decisions about their work and their environment. This practice excludes the "one-man show" wherein the Comptroller personally gets into administrative actions at all levels, solving problems and making decisions that should be made by subordinates. The Comptroller should view himself as a helper and stimulator to others who actually do the work.

An excellent way to initiate such behavior is to announce a policy of decentralized operations and centralized control. The former implies the maximum amount of activity by those at the cutting edge with recourse to the Comptroller limited to exceptional conditions. Centralized control is achieved by frequent and regular contacts and observations made by the Comptroller.

Hand-in-glove with this concept goes the idea of delegated responsibility and authority. Individuals assigned responsibility must have concurrent authority for actions and decisions.

Two important points should be made here. First, authority should be delegated to the lowest possible echelon of operation. Second, accountability for delegated authority should also be assigned concurrently. Too often, the factor of accountability is improperly applied. Its most clear-cut application comes on the battlefield, where tactical commanders are held fully accountable for their actions. Serious mistakes, or too many minor ones, cannot be countenanced when men's lives are at stake. In the administrative world, however, the game is played differently. People make misplays and somehow get by. Some supervisors don't seem to have the "guts" to discuss these errors face-to-face with inferior employees. At times, the extreme pressures for solving today's problems leave no time to handle something that happened in the past. In other situations, employees have never had explained to them what standards of performance are expected of them. Hence, not knowing what is really good or bad, they can't be held accountable.

In reviewing misplays, the Comptroller must be objective, looking at all factors. If he has been part of the action, he should look at himself with the same degree of scrutiny. Was it an error on his part that threw his employees off course? Were his initial instructions foggy? Did he follow-up? Did the employees really have all the tools needed by them to get the job done? Obviously, accountability travels a two-way street.

MUTUAL CONFIDENCE

In discussing the relationship of the Comptroller and the Commander, we accented the importance of mutual confidence. This is of comparable importance in Comptroller-employee

relations. Somehow, the Comptroller must organize a team that he has confidence in. Without such a feeling he can only find himself struggling with a morass of details in trying to get other peoples' work done.

Conversely, his people must eye him with confidence. If they don't, virtually everything he says and does will be suspect. Rumors will circulate and the farther they go the more warped the facts will become.

The job of developing confidence in himself must be undertaken by the Comptroller himself. For this task, his main resources are attitude and behavior. He can go a long way by offering full, frank information when he communicates. He cannot succeed in this by playing with the cards close to his chest. His employees should get to know him so well that they will never be surprised by his actions.

In seeking confidence, the Comptroller must not only deal candidly with his key supervisors. He must act the same way in all his contacts within the organization. And he should encourage corresponding performance by each supervisor, at all levels.

Only half the campaign is won, however, if the Comptroller and his supervisors are full and frank but the other employees are not so. To be fully effective, this kind of communication should travel with equal facility in both directions. Reciprocity is vital.

SAYING IT IN WRITING

In developing his team, the Comptroller should be cognizant of the danger of "over-procedurizing." By this is meant the tendency to put down in writing all the policies, principles, doctrines, methods, practices and procedures considered necessary for the organization to function efficiently. Anyone who has been a party to such an environment will readily recall the slow strangulation occasioned by such over-elaboration of details. Seemingly everything has been worked out in a scientifically efficient way. There is nothing left for individual initiative and resourcefulness.

Obviously, there is no magic formula whereby Comptrollers can determine precisely how much to put in writing. As was said before, it depends on the situation.

Akin to having too much in writing is permitting policies, procedures, etc., to remain in effect long after they have outlived their useful lives. This promotes an air of stagnancy. A practical scheme to police such dead wood is to schedule periodic reviews of everything in writing -- rescinding, revising, or amending as required.

A great deal of writing takes place beyond that covering policies and other organization directives. This results from the day-to-day, routine communication between people. To some, "confirm it in writing" is gospel. Others refuse to have their activity restrained by the time and effort required to prepare a disposition form or a letter.

Important studies that will probably take several weeks, or months to complete, should be outlined in writing. A clear-cut written statement of the problem will facilitate constructive, pointed thinking at the outset. It will aid in keeping the solver on course. On the other hand, an oral statement, with its inherent semantic weakness, plus the tendency of humans to forget, will foster wanderings off the main track. Feelings of mutual confidence deteriorate when fuzzy instructions are received; again at the end of the trail when, after striving hard to reach a solution, the employee finds out that the Comptroller saw the problem differently at the outset.

To these important studies, there should be added whatever agreements, problems, instructions and decisions should be reduced to writing because of their fundamental importance or because they might be misinterpreted. There, the Comptroller must judge according to the conditions that prevail.

Whether the Comptroller communicates orally or in writing, it is wise, as a general practice, not to be too specific. The right kind of an employee feels circumscribed when told too much. Basically, he wants to be told what the problem is, not how to do it. Given the "big picture" and a suggested general approach, the sky can be the limit for his performance. Also, in producing a self-created, well-crafted product, he will gain great self-satisfaction. This human factor can't be legislated or bought. He will also learn by doing, hence will develop faster.

DEVELOPING EMPLOYEES

By mentioning employees who learn by doing, we have turned up another important responsibility of the Comptroller as a leader. It is not only to build a harmonious, collaborative team, but also to provide progressive development of individual team members. From the human standpoint, the employee who feels that he is being given the opportunity to advance professionally is much more satisfied than one who feels himself stalemated. And by developing, the employee becomes better equipped to help the Comptroller get his job done.

The basic elements of the process of helping employees grow may be summarized as follows:

a. Employees should learn by actually doing. Comptrollers must resist the temptation of jumping in and taking over. The act of delegating authority and responsibility must be adhered to. "There is no substitute for experience."

b. Granted that employees will learn faster by being given the opportunity to perform, they can be brought along even faster, and will go further, if the Comptroller coaches them. Here, employees' mistakes are the basis for suggested corrective action. Sincerely delivered praise as a reward for special achievement is also

part of the process. Coaching should be continuously reflected in day-to-day work.

c. The feeling of mutual confidence must prevail.

d. The Comptroller should establish realistic standards of performance. To do this well, he must have superior ability and knowledge about his employees' work. Not to have it means ill-fitting standards, either too easy or too tough. Further, in addition to work performance standards, the Comptroller should set personal conduct standards.

e. Subordinates must feel that they are active players on a going team, not just so many cogs in a huge machine. This is the "sense of belonging." Also involved is the necessity that the Comptroller really know his people (capabilities, limitations, hopes and dreams), that he give them the chance to participate, that he treat them fairly and squarely.

Observing subordinates develop can be extremely gratifying. It is a kind of reward that isn't measurable but nonetheless is there to be cherished over the years.

THE RESULTING EQUILIBRIUM

Earlier in this chapter, it was pointed out that the Comptroller tries to equate what he expects of his employees with the needs they bring to work. By the same token, we should understand that the employee also equates. He, too, is concerned about his desires versus those of the Comptroller (and his supervisors). Whether or not he is satisfied depends on the relative status of these desires.

Several examples may be useful here. A typist who has become part of an informal group in Statistical Services resents being transferred to Accounting, located in another building and in which she has no close friends. But the Comptroller finds the transfer necessary because of a proportionately heavier typing load in Accounting. Or a man on the board in Graphics may not be technically proficient in the eyes of his supervisor even though he and his position description say he is qualified. These are types of dissatisfactions.

At the other extreme, the senior stenographer in Finance may be promoted to work for the Comptroller direct. Out of it, she gets more money, greater status, and probably a better physical place of work. Quite obviously, that is a satisfying experience.

Over a period of time, the people in the organization become accustomed to each other and their situations. They may not be completely satisfied but at least they know where they stand. An equilibrium has been reached. This is desirable. Realistically, we can understand that equilibrium in the entire organization doesn't last long because of the many diverse forces that are continually active. But from an individual or group standpoint, it can be quite lasting.

As the leader of this organization, the

Comptroller should understand the factor of equilibrium and the forces which tend to change it. The most common of these forces can be broadly categorized as: economic, organizational policy, technological, personal, organizational structure, and location. The point is not that the Comptroller should attempt to freeze his organization at equilibrium. That is impossible because of the dynamic nature of the work environment, particularly those external and internal forces beyond the control of the Comptroller. Further, changes are necessary to progress. But by being cognizant of the potential impact of changes, he can administer

them more competently so as to minimize their harmful effects.

In retrospect, it should be clear that the Comptroller's task of leading his staff agency is not easy. The road to successful accomplishment of his mission can be paved with capable, harmonious cooperation within his staff agency if he understands the nature and the effects of the human forces that are constantly active.

End of Section Three

Section Four of Brigadier General Scheidecker's article will appear in the next issue of The Armed Forces Comptroller.

KNOW YOUR OFFICERS

Lieutenant General William D. Eckert, USAF
Last President of SMAS--First President of ASMC
(Formerly Society of Military Accountants and Statisticians)

William D. Eckert was born in Freeport, Illinois, January 20, 1909. At the age of 15, he enlisted in the Indiana National Guard, and in July, 1926, entered the U.S. Military Academy. He was graduated four years later and appointed a second lieutenant of Field Artillery in the Regular Army.

In September, 1930, General Eckert entered the Air Corps Primary Flying School at Brooks Field, Texas. He graduated in July, 1931, and was transferred to the Air Corps Advanced Flying School at Kelly Field, Texas. He was graduated with the rating of pilot in October, 1931. Two months later he was transferred to the Air Force and was assigned at Selfridge Field, Michigan, where he served as chemical warfare officer until June, 1932, when he was transferred to the 36th Pursuit Squadron at Langley Field, Virginia.

General Eckert, in April, 1935, joined the 29th Pursuit Squadron at Albrook Field, Panama Canal Zone. In May, 1937, he was named a flying instructor at the Air Corps Primary Flying School at Randolph Field, Texas. In September, 1938, he entered Harvard University and in June, 1939, was graduated from the University's School of Business Administration. He then was assigned to Wright Field, Ohio, where he served successively as budget officer, chief of the Statistical and Report Branch, and executive of the Materiel Command.

In January, 1944, General Eckert entered the Army and Navy Staff College. Upon graduation two months later he was assigned to Europe as commander of the 452nd Bomb Group. He later served in that theater as chief of the Maintenance Division and chief of the Supply Division of the Ninth Air Force Service Command.

General Eckert, was assigned, in July, 1945, to the office of the Assistant Chief of Staff for Supply at Air Force Headquarters, and the following December was appointed chief of the Readjustment and Procurement Division of that office. In November, 1947, he was assigned to

the office of the Secretary of the Air Force and two months later became executive to the Under Secretary of the Air Force.

In April, 1949 General Eckert became Comptroller of Air Materiel Command at Wright-Patterson Air Force Base, Ohio, and in October, 1951, assumed additional duty as acting assistant deputy commander of Air Materiel Command. He was designated assistant deputy Commander in March, 1952.

General Eckert was transferred to Air Force Headquarters in June, 1952, for duty as Assistant Deputy Chief of Staff for Materiel.

He was assigned to Headquarters, Tactical Air Command on 15 July 1956 as Deputy Commander and redesignated Vice Commander on 5 November 1956.

DECORATIONS

General Eckert has been awarded the Distinguished Service Medal; Legion of Merit with two Oak Leaf Clusters; Distinguished Flying Cross; Bronze Star Medal; Air Medal and Foreign Medals.

He is rated a command pilot and technical observer.

He and his wife, Mrs. Catherine Eckert, have two children -- Catherine and William.

PROMOTIONS

He was promoted to first lieutenant (temporary) May 8, 1935; to first lieutenant (permanent) August 1, 1935; to captain (permanent) June 12, 1940; to major (temporary) July 15, 1941; to lieutenant colonel (temporary) January 5, 1942; to colonel (temporary) August 1, 1944; to major (permanent) June 12, 1947; to colonel (permanent) April 2, 1948; to brigadier general (temporary) April 14, 1948; to major general (temporary) July 28, 1951; to brigadier general (permanent) July 21, 1952; to major general (permanent) December 13, 1955; to lieutenant general (temporary) August 31, 1957.

IT CAN'T HAPPEN HERE
or
THE ACCELERATION OF PARKINSON'S LAW

Major Joseph C. Armour

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Chapter I

INTRODUCTION

"The avenue in front of my villa was in such a sad state of disrepair that it was barely possible for a chariot to pass in front of my gate. I had petitioned the authorities so many times to have it repaired and was referred to different officials so often, no one seeming to have authority without approval of various other petty officials that, in despair I sent two of my slaves out and they made the necessary repairs. Some days later I received a notice to pay six silver talents for mutilation of the public right of way."--Julius Quintus Flavius, Circa 400 AD.

This quotation is an example of the ultimate in successful administrative bottle-necking and a quaint lesson in the historical background of how to perpetuate jobs and circumvent the effect of such vicious present-day influences exemplified by efficiency, increased production and other evils of modern business practices that result in simplified work procedures and finally, reduction in force.

In order to protect your own job, insure continuous promotion, and enhance your prestige to the point of becoming indispensable to the organization, the following chapters are devoted to some of the tried and proven methods that anyone can put into operation with a minimum of effort and no resultant loss of sleep. Properly implemented, they will keep top management completely in the dark and enable an ambitious administrator to reach the top of the ladder in much shorter time than following the accepted myth that honesty and hard work pay off in the long run.

Chapter II

THE CONFERENCE SYSTEM

One of the best ways to slow down an operation is to schedule a conference. This technique is most desirable because one individual can promote it, it requires no collusion, assistance, and no confederates. No one can point the finger and say this is sabotage. The procedure goes something like this: Mr. A. has a paper that will require concurrences before it is released. Of course the obvious way is to discuss the paper with those concerned individually, get concurrences and turn the finished product over to the boss. But does Mr. A. do this? No! He sees that this is a good opportunity to waste a lot of time and make it look as though he really needs that deputy he has

been fighting for. So he then calls a conference. First he has to establish a date and hour that suits everyone concerned. The conference should have at least four present and it probably would be better if each brought his assistant. "Bring your assistant" is a very good trick because this assistant is a lower level employee who normally does not attend conferences and is quite flattered to be invited. Here is his chance to get his two cents in and impress these people with his heretofore unrecognized promotion potential. So Assistant "B" makes a thorough search of regulations and get a good speech together and, come rain or flood, before the conference is over he is going to say it all.

Well, the conference is scheduled so Mr. A. tells his boss that he has contacted all these people about this paper (which is probably a decision on whether to use brass or steel paper clips) and that a conference has been set up for Thursday of next week. The boss, not having read the paper, agrees, so Mr. A. goes about scheduling the use of a conference room and finds that Thursday of next week is already scheduled so it will have to be the following Tuesday. The suspense date will then have to be postponed so a letter requesting the extension of the suspense is prepared with information copies for and concurrences from all conferees involved in the project are obtained. A pile of paper the size of the city directory is placed on the boss' desk for signature (asking for extension of suspense date).

By the time the conference date rolls around the following has occurred:

- (a) One conferee is on TDY.
- (b) One conferee has forgotten about it.
- (c) One conferee is home sick.

All this should leave Mr. A. as the sole survivor and make an ideal conference, but he has Assistant "B" to contend with and all the other assistants, eager beavers. All prepared speeches are hauled out and the time of opportunity is here. The conference closes about quitting time and a raft of notes has been prepared in the form of "information upon which to base a reply."

Then a TWX arrives from HH (Higher Headquarters) saying the report is expected, desired and wanted -- get it in on time! This, of course, means we work overtime so a request for overtime is prepared for Mr. A., his typist and each of the conferees (they have to initial the file copy). Permission is then obtained from AG for Mr. A. to sign the letter of transmittal (which he drags out six months later to prove he has been signing correspondence in the past) and everybody goes home for supper.

After supper they assemble for overtime and one silly fool suggests they initial the draft so that all except Mr. A. and the typist can go home. That idea gets a very cool reception as that reduces the "time and half time" for the others.

At 2300 hours the considered opinion of the command on paper clips is dropped in a corner mail box.

Chapter III

FRIDAY AFTERNOON FLOOD

Anytime the boss gets too curious about what kind of stuff is emanating from his office, it is time to pull the Friday Flood trick on him. Some bosses are so narrow-minded that they like to know what is going on even to the point of reading every word in each letter that they sign. This disease, hypercuriosity, must be cured or the boss will find out that we do not need all these people around here.

What shall we do? The answer is not simple and the cure takes a lot of thought and planning. So starting on Monday morning we begin to work on everything at once, a small piece of each product at a time, in such a manner as to have nothing completed until about Thursday noon. Our typists in the meantime have been working like mad on the clerical work and as the stuff is ready for typing (but not before Thursday noon!) typists are freed up, the typing begins. (Note: All the typing in this office can be done in one day.)

Between Monday and Friday the boss is very likely to get curious and inquire about progress of the work. But everything is progressing and everybody is busy. Nothing is being completed but the people sure are pushing and it looks as though everything will get out (and it will). Even by going from desk to desk the boss notes that everyone is busy and working hard.

Friday morning the boss seems to think that some of this stuff ought to be ready to go and he is assured this is true, except that a couple of these things to be retyped due to minor errors that crop up from time to time. But it will get out!

So the people who did all the work all week are busy proof-reading the final copy and about 1500 hours the deluge begins. Paper after paper begins to fall into the boss' "in" box faster than he can read and in 15 minutes he realizes that if all this is going to get out he won't be able to read it. But he has good dependable people and he will read the file copies (which will all be filed before he gets his coffee Monday morning). So with true soldierly courage, he rapidly signs it all and it all goes out on time and the office maintains an unbroken record of never having a late report.

The proper use of this technique can often result in the boss running his office for years without knowing what goes on and

a. protecting all the extra people he has,

- b. keeping everybody happy and ignorant,
- c. getting a very superior efficiency report,
- d. and learning nothing except how to sign his name faster.

Chapter IV

THE BOXERS

Defenders of the empire will find that boxing is a very effective means of preserving the prestige (and grade) of a supervisor and also maintain a high payroll. This is best used when the grade of the supervisor largely depends upon the number of people supervised. A good boxer can perpetuate a dynasty in this manner for an indefinite number of years, if he is agile and fast on his feet. However, timing is essential.

The correct procedure is to commence on the occasion of the arrival of a new boss. Of course this new boss will look to you for a complete briefing on the internal operation of the office. At this point you have his confidence and, for the moment at least, he is absolutely dependent upon you. You must be careful to retain that confidence and, if you do, you will not only maintain your empire but undoubtedly be able to expand it, thereby increasing your own prestige, personal aggrandizement, and size of your pay check. All to the ultimate detriment of the taxpayer.

So the boss comes in and you show him around and have a heart to heart talk with him. Be perfectly frank and tell him what tremendous responsibility he has. Be sure to quote a couple of Acts of Congress and penalties set forth therein. Build your people up as a group of capable technicians that you have personally trained. Throw in a few hazy remarks about the fine reputation the office enjoys and how the commander depends upon us for his next breath. If you handle this phase properly, the old boy will probably go home with dreams of becoming an Assistant Secretary of Defense before the year is over.

Then send him off for a coffee break and get your immediate subordinates together and lay down the law. This should be accomplished with the same dramatic approach as Moses used when he brought the Ten Commandments down from Mt. Sinai. Explain that the new boss is not going to change the office but that he is a most capable man and it "seems" the General is giving him some additional duties. Therefore, it is necessary that all questions, contacts, work assignments and finished products are to come and go through you because it looks as though he is going to be a very busy man.

By the time he comes back from coffee you should have all lines of communication closed and we are ready for the second talk with the boss. Then explain to him that you intend to be as helpful as you can and make some veiled references to the previous incumbent as also having been most capable with not too many bad habits. However, during his tenure he had you

take care of most of the details such as time and attendance reports, records disposition, routine correspondence, and then ask him what he thinks. He will undoubtedly let you take care of the time and attendance reports so you have the first foot in the door. Politely mention the other details like requests for publications, requisition of office supplies, etc., and after you have three or four authorities for signature you are "in like Flynn."

The next day you brief your new boss on the terrific workload and trouble you are having with both manpower control and civilian personnel. A couple more subordinate supervisors could help the mission and the jobs are not graded adequately. These two items are familiar themes and he has undoubtedly beat his brains out on both before. So it will not shock him.

Next, be sure to have control of the in-box and parcel out the routine as much as possible and only let the boss have stuff that you are afraid to keep away from him. Make everything a major problem and keep your people busy writing. Don't simplify anything, keep it as involved as possible. Staff all work with everybody down to the janitors.

Follow through on the action on this volume of paper so that you can prove to the boss how much "detail" is involved. More typists will be needed (always have drafts of everything made as this doubles the typing load). More clerks will be needed and your grade will go up and up. If your typists ever generate any idle time, start a "training program" and let them copy the dictionary. Keep file copies of everything in two copies in case someone wants to borrow one. Attach all pencil drafts and notes to the file. Try to have each letter in a separate manila folder. This really builds volume.

Now you have a big deal. One danger of this is that some smart-alec subordinate supervisor may pull this on you and you find yourself boxed.

The second is that your boss may be narrow-minded and start spending his time finding out how his office works. Be on the alert for this at all times or you might find yourself in the bread-line. The only cure is to go into operation snowflake (see next chapter).

Chapter V

OPERATION SNOWFLAKE

About the most evil thing that can happen to a deputy or supervisor is get a boss who wants to know all the details of how his operation works. He is easily identified as a person who wants to improve, cut costs, reduce personnel and increase efficiency. This type of person is very dangerous to empire builders and climbers and can damage the career of an otherwise successful big-time-operator.

As soon as possible after identifying an

individual as being capable of breaking out of a "box," Operation Snowflake should be instituted. This is very easy to do on practically a moment's notice. First start shoving all the paper into his in-box. Then reduce everything to paper. Ordinary messages that could be delivered verbally or by telephone should be typed on a DF. All employees should become very efficient and each carry a note book. Whenever anyone asks a question, pull out the notebook, stop all work, go find the answer, dictate it to a stenographer and transmit it through the Message Center by DF.

In about 24 hours the boss' in-box should be so full that he has to work overtime to empty it. This will keep him from interfering with the work as emptying the in-box is a sacred duty.

Soon he will ask you to take care of some of the detail at which time you can cut the flood slightly. But always be sure to put enough in that in-box to keep him busy.

In order to insure that the boss keeps working on the paper, remind him from time to time that there are suspense dates and deadlines to meet. If there are not sufficient suspense dates, try putting some on yourself. Very few people question the source of a suspense date.

Chapter VI

COMMAND BY COMMITTEE

Now that you have come this far and mastered the previous chapters and have your trusted subordinates trained in these procedures, you have arrived at the point where you can expand your operations. This will lead to no end of influence. In fact, if tactfully and modestly prosecuted this final step can make you the power behind the throne and might actually put you on the throne itself. Just be a little careful that the throne is not in the out-house.

In every organization there are always good jobs becoming vacant and consequently opportunities for promotion. Too often these are filled by competent and efficient people within the same office. This, of course, limits the field of selection and perpetuates efficiency. Under this system you can never get ahead.

So suggest to your boss that every time a good job becomes vacant a committee of supervisors be appointed to obtain as many qualified applicants as possible, interview some and recommend one or two for interview by the chief who has the vacant job. This will save the chief who is very busy and whose time is very valuable from having to talk to all the "unqualified" and from the laborious, long interviews. It will also assure that promotion will go to people who are accepted by other members of the organization (and members of the committee) who have day to day knowledge of these applicants, their good and bad points, etc., also it will keep up morale. Since this is your idea

and "you have given it a lot of thought" and for various other vague reasons, you can dream up, your boss will probably agree to your next suggestion that you talk it over with "Personnel." The personnel officer will jump at this idea as several chiefs have recently made some very bad selections and not taken the people he has recommended.

Again, this is your idea so said personnel officer will lean on you for advice and will recommend you for chairman of the committee. At this point you have everything under control. You recommend committee members, guide each committee meeting, get your trained underlings promoted to strategic jobs and spread the gospel

of the previous chapters of this book and the whole organization becomes your baby. These people owe their jobs to you and have been prostituted and now your termites are at work.

From here on in until you retire you should be able to safely and comfortably generate more inefficiency, confusion, misunderstanding, and waste than on a Roman Holiday. You are the guiding influence and can assure that only the "faithful" are rewarded.

CONCLUSION

DON'T LAUGH, IT MAY BE YOU!!!

KNOW YOUR OFFICERS

Major General Bickford Edward Sawyer, USA (Ret.)
Second President of ASMC

Born in Melrose, Mass., August 1, 1894, son of Edward W. Sawyer and Flora Bickford Sawyer. Descendant of Edward Sawyer of Lincolnshire, England, who emigrated to Ipswich, Massachusetts, in 1631. Married Grace Bell of Medford, Mass., on 19 August 1917, and has two sons--Major Bickford E. Sawyer, Jr., now an aide to the Secretary of the Army, and Captain Richard V. Sawyer, (Finance-Reserve), Office of the Army Comptroller (and a Life member of the ASMC).

Enlisted in 1st Vermont Cavalry, VNG, 9 Sept. 1913. Transferred to Machine Gun Company, 1st Vermont Infantry, VNG, 1 May 1916; Honorably discharged, 1 Jan. 1917. In Federal Service from 19 June 1916 to 16 Sept. 1916.

Commissioned 2nd Lt. Cav. ORC, 28 April 1917. Served overseas with 1st Infantry Division and Hqrs Third Army Corps. 1st Lt. Cav. ORS, 21 Nov. 1919. Captain, Cavalry, Regular Army, 28 Nov. 1920. Served in 3rd and 4th Cavalry and 1st Machine Gun Squadron. Transferred to Finance Department, 1 August 1928; Major, Fin. Dept., 13 Aug. 1935; Lt. Col., Fin. Dept., 1 Sept. 1940; Colonel, Fin. Dept., 24 Dec. 1941; Major General & Chief of Finance, 28 July 1951; Retired, 31 August, 1955; Served as Disbursing Officer, Panama Canal Dept., and Fort Des

Moines, Iowa. Chief of Budget Division, Office Chief of Finance; Assistant to Budget Officer, War Department; Budget Officer, Civilian Conservation Corps; Fiscal Advisor Director, W.A. A.C.; Fiscal Director, 8th Service Command; Served overseas as Fiscal Officer, Hqrs. Pacific Ocean Areas, and U.S. Army, Pacific. Comptroller, Fourth Army; and Chief of Finance, U. S. Army.

Graduate, Boston English High School, 1913; Norwich University, Vermont, 1917; LaSalle University, Illinois, 1938; Harvard Business School, 1951; Cavalry School, 1922; Signal School, 1925; Finance School, 1928; Army Industrial College, 1938.

Decorations and Awards--Legion of Merit; Army Commendation with two Oak Leaf Clusters; Mexican Border; German Occupation; Victory Medal WWI with three battle stars; National Defense; American Theatre; Pacific Theatre; Victory Medal WWII and National Defense Service Medal.

Societies--American Society of Military Comptrollers; Society of the First Division; Retired Officers Association; Army Finance Association; Military Order of the World Wars; Order of Lafayette; Harvard Club; Norwich Club.

ERROR DETECTION BY SAMPLING MILITARY PAY RECORDS

Arthur E. Tiemann
Assistant Director, Progress Reports and Statistics Division
Office of Navy Comptroller

The Navy Regional Accounts Offices make a semi-annual examination of military pay records and related service records to develop information for the purpose of identifying errors so that corrective action may be taken. Currently, the number of pay records maintained for a military strength of about 650,000 is so great that it is obviously impractical for examiners to try to locate every single erroneous payment and correct it. But since all the records cannot be examined, what are the alternatives if these offices are to carry out their responsibilities? One alternative is to select a sample of the records. But here we have a problem of deciding how to select the sample. To solve this problem requires a definition of the purpose of the sample.

Is the sample to be drawn in such a way as to maximize the number of errors detected, or is the selection technique to be such that the composition of errors in the sample is representative of the errors among total pay records?

According to the Navy Department, Bureau of Supplies and Accounts Administrative Examination Procedures Handbook, the purpose of administrative examinations is to "discover errors and areas of error, to initiate timely corrective action, thereby providing for early adjustment of errors discovered, prevent recurrence of errors which result from misinterpretation of instructions and to strengthen the system of internal control."

It is a management decision, not a statistical one, to determine which aspect of these various purposes should be emphasized. However, if one of the purposes of administrative examination is to obtain a representative picture of the error situation among the military pay records, scientific sampling methods can be applied advantageously. The current instructions provide for both scientific and selective sampling. Selective sampling is the term applied in this discussion to the technique of examining records on the basis of a preliminary screening followed by a selection of those records which past experience has shown as likely to contain errors. As a general guide for a large, complex, centrally-directed program, this two-pronged approach of scientific and selective sampling was established to meet as many administrative needs as possible. The procedures set forth had to be sufficiently simple to be carried out uniformly by all Navy Regional Accounts Offices, but they had to be sound statistically so that a meaningful interpretation could be placed on the results. There is no conflict between selective and scientific sampling. Based on selective sampling, the more

information that is known about the composition of the errors among the pay records, the better the scientific sample which can be drawn. In order to understand how knowledge of the subject matter can be applied to sampling, it is necessary to know a little about what scientific sampling is and why it works.

The principle behind scientific sampling is the assignment of probability to the accuracy of the information extracted from the sample. The method of selection is usually described as random. By random, we do not mean haphazard.

A random sample of military pay records, if it is to be statistically valid, must be drawn in such a way that each pay record in an installation has a known mathematical probability of being drawn into the sample. In the kind of sampling plan provided by the instructions to the Navy Regional Accounts Offices, these probabilities are equal for each pay record within an installation but vary from installation to installation. For example, in an installation with 500 records, the probability of each record is one in 500. The entire mathematical theory used in determining sample size for a pre-assigned accuracy is dependent on this randomness. To the extent that a sample is drawn in such a manner that some pay records have a better chance of being drawn than others, the representativeness of the sample is jeopardized and the statistical validity of the results becomes questionable.

However, randomness does not stop with the selection techniques. Every record drawn in the scientific sample must receive equal treatment in the examination process. Unless the sampled pay records are all given a thorough examination, the picture of the total pay records is likely to be distorted, or, in statistical language, biased.

Actually, the method of selection used by the Navy Regional Accounts Offices for the scientific sample is known as systematic sampling. This is the term applied where every n -th item is selected from the total available items. This technique provides random samples only if the order of the items — in this case, military pay records — is itself random. If all the errors of a particular type are scattered throughout the total in a regular pattern, for example, if every twentieth record has flight pay, a sample of every twentieth record would pick up one hundred percent of the flight pay records or none at all. Although the example just described is extreme and highly improbable, it is possible that records might have been rearranged with a particular pattern for some special study just

prior to selection of the sample. As an additional precaution to assure randomness of a systematic sample, the examiner should start counting, not from the first record, but from a randomly selected record in the first group.

The type of random selection described in the instructions to the Navy Regional Accounts Offices is not the only statistically valid one, nor is it necessarily the best one under all circumstances. The chief arguments in its favor were its simplicity and the ease with which administrative control over the technique can be exercised. A more efficient type of sampling is possible if we know in advance that there is a lack of homogeneity among the records. For example, if it were practical to split all the records into two groups -- one of which had one error pattern and another had a different pattern -- a random sample within each of the two groups could be more accurate than a sample of the same size drawn at random from the entire list of records. This split type of sampling is known as stratified sampling. Because of the difficulty of providing uniform instructions which would be carried out uniformly, stratified sampling was not instituted.

By using scientific sampling methods, we can say that the percentage of errors in the sample at an installation is within some predetermined range of the percentage of errors among all the military pay records at that installation. In addition, we can assign mathematically exact odds to the accuracy of this statement. For example, if a sample of 197 at the Naval Air Station, San Diego, shows that 14 percent of the records examined have errors, we can say that the odds are 19 to 1 that the percent of errors among the 10,000 records at the Naval Air Station, San Diego, is between 11 percent and 17 percent.

Technically, this kind of a statement can be verified experimentally in the following way. If we had the time and the inclination to take all possible samples of 197 pay records out of the 10,000 records available, approximately one out of every twenty such samples would contain a percentage of errors that was greater than 17 percent or less than 11 percent. Mathematically, we can avoid taking the millions of samples to prove this point and make the determination in advance. If we say that 19 to 1 odds are acceptable and that plus-or-minus 3 percent is a workable range, the mathematics show that a sample of 197, taken at random out of 10,000 will meet these criteria. Here we see the necessity for random selection. Only if every possible combination of 197 records has an equal chance of being drawn, can we assign exact odds to an acceptable range.

The mathematics show that as the total number of records at an installation get smaller, the proportion of records in the sample must be

larger to provide the same level of accuracy. Conversely, as an installation gets larger, the sample size increased but not proportionately. Also, if the percentage of a particular type of error in the total number of records is, for example, 1.5 percent, and if the acceptable range is 3 percent, it would be possible within the 19 to 1 odds to select a sample in which no errors of the type in question appear. This is obviously a limitation of the statistical procedure used by the Navy Regional Accounts Offices. However, there are statistical techniques available to determine how large a random sample would be required to include at least one case of specified type of error, if, in fact, this type of error occurred in the total number of records with some predetermined frequency. This approach has been suggested by the Air Force in the investigation of fraud.

An important consideration in deciding whether to apply scientific sampling or not is the question of cost. In these days of expenditure controls and reductions in maintenance and operations dollars, the question of maximum return for the dollar becomes even more serious. As was indicated earlier, the larger the sample, the greater the accuracy. However, the larger the sample, the greater the cost of the examination. The question of how much money and manpower we are willing to spend for added accuracy in our sampling can be answered with greater validity if we are using scientific sampling methods. Because we can specify the increase in accuracy accompanying an increase in sample size, we have a basis for a decision as to whether we need the added accuracy. Furthermore, increases in sample size are not accompanied by proportionate increases in accuracy; so that we have the basis for a built-in economy factor in scientific sampling at large installations. In fact, it can be shown that for a given accuracy -- after a point -- increases in installation size do not require any increase in sample size.

The validity of scientific sampling is ultimately determined by the very practical test of whether or not it works. Enough time has passed since scientific sampling was first introduced in the Navy Regional Accounts Office examination program so that statistics are available for analysis. Analysis bears out the fact that scientific sampling procedures generally produce valid statistics. But analysis also points out where scientific sampling may not have been carried out as thoroughly as possible. As the error rates were summarized by type of installation and finally for the shore establishment as a whole, it was found that the accuracy improves significantly. One of the goals of the examination program is the determination of the magnitude of the error rate for the Navy. Scientific sampling is giving the Navy a good picture of how high or low the error rate is in the area of military pay records.

THE DILEMMA OF THE STATISTICIAN

Major General Samuel V. Anthone, USAF (Retired)

From time immemorial, men have abhorred numbers. In fact, numbers have often been assumed to be part of the exclusive bailiwick of Beelzebub. In the Book of First Chronicles we read, "And Satan stood up against Israel and moved David to number Israel and David said to Joab and to the Princes of the people, 'Go number Israel from Beersheba even unto Dan and bring word that I may know the sum of them'."

The story goes on to indicate that some of the tribes were omitted so that the final count was not correct. Let me hasten to add that this ancient pattern is not the model of our Bureau of Personnel Statistics of the Defense Department, although in a parallel enumeration of the Armed Forces, some of the troops seem to have been passed over.

If this abhorrence is real, universal and significant, the Statistician may face a much more serious job than he bargained for in an attempt to raise standards. Statisticians, like ordinary human beings, which there is no doubt they are, are often or shall we say usually confronted with a problem of choice; they, in that case, cannot deal with reality in all its complexity but must deal with some simplified model of reality. Nevertheless, the attitude of people toward numbers is that the numbers threaten personal security.

Statistics may be defined as facts in numerical form, or the numerical results of analysis. Because numbers and mathematics can be abstract, people often tend to look upon statistics in this light. There is present, therefore, the danger that the individual will forget that numbers can represent concrete things or a statement of a definitely known condition. Since statistics represent the concrete, it follows that the use of statistics must always be made with reference to those things or conditions to which they apply. This is the condition of safety for the use of numerical fact. Situations in which there is failure to observe this condition of safety may indeed cause trouble for the statistician's conscience.

Whenever someone refers data to a basic area which is not that for which the statistics were compiled, he may find himself possessed of conclusions which appear to validate a situation entirely different from that which the numbers really picture. To determine whether there has been a shift in objective, one should be able to write in a single simple sentence the exact objective desired for either or both cases. The results should agree. If this cannot be done, there is need to return to a fundamental study of the object.

An illustration of a shift in the basic point of view is to be found in the Price Index of the Bureau of Labor Statistics. In the language of the man on the street, this index usually is referred to as a cost-of-living index. Nevertheless, one is utterly unable to write a definition of a cost-of-living which is acceptable to all points of view. Without definition, a cost of living is meaningless. Is this index intended to reflect the cost of food, shelter and clothing which will provide a minimum condition of living so that a man may not die? This is not wholly determinable, since some men will perish under less austerity than others. Moreover, most wage earners will deny this minimum is acceptable, since many of them are becoming to believe that an automobile, a radio, a television set, not to say a refrigerator and a washer-dryer combination, should be included, without doubt, as necessities in a minimum cost-of-living index. They go even further and declare that their relatively small taxes should be included. Maybe we should achieve complacency by writing off appalling Government waste as a necessity of life. By contrast, a price index can be defined to include certain commodities sold at retail. This will bound the index and define the price area. Whether they represent everything which the greedy think should be included for the index is quite another matter. It is cases such as these that cause the statistician's conscience to jump.

This same difficulty is used as a device to produce a predetermined answer. Whether it is done thoughtlessly or deliberately, the statistical results are open to question and are those which should trouble the statistician more than they sometimes do. Thus, it is notable that politicians and lawyers seem to decide first what conclusions are to be reached and hunt for numbers which appear to carry the same level as the given situation.

Data misused for this purpose are not evidence; they are irrelevant nonsense. This slick approach may seem desirable to some but it has no place among men who seek the truth.

To show that the objective and the statistical work may be correlated and correct, but deceitful, we might extend the index-number illustration. Hearsay reports that a division or department in one of the Armed Forces made an investigation and as a result found that what they call the cost of manning was going down. The Congress, who had to vote the funds for the purpose of manning, happened on a copy of the report and immediately concluded to cut the appropriations. Whereupon, the same eager people shook the dice box once more and found

that although the previous report was absolutely correct, the cost of living for members of the civilian staff of that department was going up at an appalling rate. This may sound like a group of individuals engaging in double-talk, but both compilations could have been justified if one is permitted the simple device of making two definitions of the cost of each part of the department involved. People, of course, in cases like this, blame the number work because that is the part they do not understand. In the armed services a case of this sort is called the "number racket," but its cure is in recognizing differences in definitions not in understanding some difficult computations.

This failure to know that statistics must be related to objectives is one which is continually happening throughout the human world in which we live. The statistician's conscience presumably should view this problem with understanding, but not necessarily in violent rebellion. I doubt whether this disease can be cured, but at least we can continue to teach a way toward better statistical health.

It has been said that one of the charges against data compiled for public use is that of hasty work. At times, undoubtedly, this charge could be supported. Yet it would seem as though it was mixed with other problems. What appears to be hasty work may be incomplete work because of the difficulties found in the job of collecting the material. For example, suppose that it is desired to obtain the costs of operations of certain Air Bases. If a total is not wanted, the first thought is to classify the bases by groups, carefully defining the character and mission of each base within each group. Even here there are difficulties. Assuming that these difficulties have also been surmounted, there may be the ultimate one of inability on the part of Base Officers, for example, to contribute the cost figures of particular parts of the mission of the particular Base. If at any step along the line of collection of the data there is a serious block, the data are incomplete. To the outsider, the totals may appear to be the result of hasty work, but yet this is not so. The compiler possibly was slow in securing the figures or possibly some of the Bases did not compile the exact requested information.

Since the middle 1920's there has been an enormous increase in the volume of statistical data which has been made available to the general public. Could it be true that living in a wealth of statistical data it is inevitable that

some series would not be of top quality? Since data in the Defense Department are used as a basis for decisions, the Secretaries and Chiefs-of-Staff of the various arms might find useful rough approximations to ideas they seek out of imperfect material. One wonders also whether the natural irritation of a statistician does not occur because he fails to find exactly the series of data which he is seeking.

The statements which have just been made were said with the thought of observational data in hand. Whenever the numerical values are the result of a sampling process, additional care must be taken, since the design of the sample often will make the difference between usable data and those which are of doubtful quality.

Finally, there is the problem of pressure on civilian and Governmental officials to produce figures which seem to support a desired political position. Great credit is due to those who have refused to permit a compromise with high standards for political purposes. Cases where men have resigned, rather than compromise have been reported even within the last few years. One rejects with scorn interpretations of facts which have come from high places and which are obviously designed to protect and support those who are in commanding power and to deceive those who do not know how to discover the fraud which is present in the publicized figures.

Whenever the problem is that of communication within a given business and for private uses only, the same fundamental premises of care, completeness of data, and thoughtful reporting are also necessary. The pressures within a company or organization which the statistician believes force him to support a predetermined position are not unknown. As it is presumed that he must live with his conscience, as well as with his associates and superiors, the possibility of an inward conflict is created. This is the additional element of primary importance in the handling of statistical problems within an organization in contrast to the use of public data. Sometimes differences of opinion are justified. It must be realized that colleagues can be right. No matter whether different objectives, lack of mutual understanding, or just plain lack of knowledge are involved, the lines of communication are jammed. The only reasonable approach here is to get the various parties together in a huddle and then work out some basis of common knowledge.

OLD MANAGERS AND NEW METHODS

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The Navy today is a vital, dynamic thing — moving progressively forward. As a result, the U. S. Navy, measured in terms of modernization, technological complexity and capital expenditures required per unit of asset is expanding at a truly phenomenal rate. Many of our most urgent problems have been created in part by the fact that the requirements of management have expanded at a faster rate than the tools, attitudes and philosophies available to the senior officers to combat them.

Naval officers in positions of management responsibility must appreciate the fact that they have completely outstripped the narrow confines of "Navy specialists". They are also responsible for operating a portion of big business. Just as new tools have become available for the physical job of maintenance and construction, so now there are new tools for business analysis. These new tools are primarily mathematical and statistical in nature. A look at the broad problem areas involved is of interest:

1. Replacement of old equipment.
2. New capital investment.
3. Transportation scheduling.
4. Location of facilities.
5. Inventory control.
6. Maintenance and operation of facilities including utilities systems.
7. Budgetary and related financial problems.

The average commanding officer may have every reason to object that he is already being stretched too far to the point that he will lose all value with the inevitable result that he will be a "jack of all trades but master of none". Unfortunately most objections to management programs have been unrealistic. They have not been constructive in nature. The usual approach has been:

"I do not like Thee Doctor Fell,
The reason why I cannot tell,
But this indeed I know full well,
I do not like thee Doctor Fell".

As engineers we would not think of starting an excavation job by digging with our hands. It is similarly necessary to employ the best management tools available for accomplishing the administrative tasks. Responsible seniors are entreated to achieve an understanding of the purpose that these tools can serve. New programs and methods, many of them adopted from other sciences and disciplines are continually being investigated. Since methods are changing so fast, study of the field must be continuous,

and related to Navy management requirements. It is for this reason that only a dynamic philosophy for management will suffice. A proper evaluation of the new management tools depends upon:

1. The ability to see the Navy and the Bureau as a whole.
2. To know whether objectives are mutually compatible and valid.
3. To recognize how various functions of the organization depend upon one another.
4. To determine which assumptions must be made in order to allocate resources in an optional manner.
5. To recognize various alternative courses of action and their potential results.

SIGNIFICANCE OF PLANNING AND CONTROL

Experience at Navy activities, as in most large organizations both Governmental and commercial, indicates that there is a constant tendency to expand the function and personnel of any department in response to the many demands placed upon it.

The difficulty is that the lack of management control at any one time may be hard to detect. All the people may be obviously busy. It is therefore often assumed that the department is functioning efficiently. In many cases legitimate increase in the volume of business hides the fact that activities of questionable justification have been undertaken by a department. There is also a tendency for forms, reports, functions, and methods to be continued after they have outlived their usefulness. It can be stated that management planning and control will exist in the Navy when three things happen:

1. A real need exists for a new way of managing. (The author contends this item is a "fait accompli").
2. Senior officers of the Navy recognize this need. (There is still room for development in this area).
3. Top management in the various bureaus of the Navy Department does something about it.

There is no disputing the fact that the business world has a more or less realistic index of operations in the profit goal. It has been frequently pointed out by authors that this motive or objective of corporate profits is lacking in Government operations. It is not true however

that the factors in industry which serve to sacrifice profits for volume, false efficiency, prestige, or some other pet policy cannot be considered in the Government on the basis of a so called "reverse target" operation. The factors reported by business as opposing to the single minded devotion of top management to profit may be reclassified for the Navy as:

1. Empire building.
 - a. Organization unit or activity must be "biggest".
 - (1) Manages to blanket the Navy with an awesome array of overhead personnel.
2. Ivory tower perfectionism.
 - a. Eyes fixed on the goal of efficiency based on rigid synthetically derived standards which have no realistic application in the activity involved.
3. Maginot line building.
 - a. Passes up the advantages of management improvement programs. Immune to new ideas for fear of taking risks. Insisting for example on an over complemented staff, excessive contingencies, etc.

In the absence of a profit goal in the government there is no reason why a management cannot strive to eliminate the aspects of empire building, ivory tower perfectionism and maginot line building. By so doing "profit" will be achieved.

The entire concept of management improvement is based upon the determination of cost and labor data in order to solve specific managerial problems. Proper attention to this method of accumulating data brings into proper context the significance of planning and control. Too often in the Navy we are inclined to consider planning as a narrow process associated specifically with design and construction. Actually from the management standpoint planning is much broader in scope including:

1. Formulation of policies in order to establish the objectives of the Bureau.
2. Design of organizational units in order to establish relationships and to organize activities.
3. Selection of resources so as to provide necessary staff, facilities and equipment.
4. Development of techniques and procedures so as to provide for direction of operations.

The proper application of control in Navy management means the conformation of events and plans. It provides for:

1. Individual responsibilities.
2. Classification of data.
3. Accumulation of performance data.
4. Measurement of data.
5. Reporting results.

In industry the basic criterion of planning and control is provided by certain indices such as the profit sales ratio, i.e. as sales go up profit should rise proportionately. Certainly it is not too far fetched to believe that even with the elimination of the profit motive, certain reliable indices relating to the field of public works and public utilities can be established. Planning and control has been defined as:

1. Setting a profit goal.
2. Setting departmental goals which, taken together, will achieve the profit goal.
3. Measuring progress against these standards.
4. Making continual adjustments to keep the whole organization moving in balance toward the goal.

It may be that many of the members of top management in the Navy are convinced that all the tools necessary to achieve planning and control are used. In the humble opinion of the author, however, the two basic steps of planning and control are ignored:

1. Gearing the operations to a predetermined objective consistent with maximum service to the Navy.
2. Seeing that the various control tools are all coordinated to achieve that objective.

An attempt has been made to focus attention on the dynamic aspect of management. The techniques of industrial management are being applied in the Navy to an ever-widening circle of tasks and problems. Those who hold a responsible position in the Navy must appreciate the full value of those management tools. This presents a distinct challenge to those senior officers whose training and experience has not included an opportunity to learn these techniques and their value. It is only by a proper appreciation of this area that the Navy can insure that management will be founded on facts and reliable information. Decisions can then be made, not merely to maintain a "status quo", but in order to achieve improvements and efficiencies.

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